

88871

SEARCH REQUEST FORM

Access DB# _____

Scientific and Technical Information Center

Requester's Full Name: SHANON FOLEY Examiner #: 77851 Date: 3/11/93
 Art Unit: 1698 Phone Number 308-3983 Serial Number: 09/431607
 Mail Box and Bldg/Room Location: 8E12/8007 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.


Title of Invention: Method of making compounds that react with HIV and other retroviruses

Inventors (please provide full names): _____

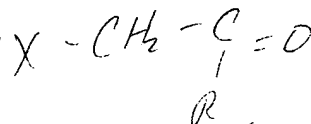
Louis Henderson, Larry Arthur, William Rice

Earliest Priority Filing Date: 9/23/94

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search for a disulfide having the formula: $R-S-S-R$
 and makimides having the formula 

Jan Delaval
 Reference Librarian
 Biotechnology & Chemical Library
 CM* 1E07 - 703-308-4498
 jan.delaval@uspto.gov



I have also provided the only chart of chemicals attached in the specification that may be useful. If you need anything else, please let me know. Jan - thank you so much for the notes you have provided in your searches before. You have been a great help in my "chemical cases".

Please give to Jan Delaval.

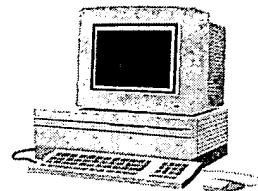
STAFF USE ONLY

| | | |
|-----------------------------------------|------------------------------|-----------------------------------------------|
| Searcher: <u>Jan</u> | Type of Search | Vendors and cost where applicable |
| Searcher Phone #: <u>41498</u> | NA Sequence (#) _____ | STN <input checked="" type="checkbox"/> _____ |
| Searcher Location: _____ | AA Sequence (#) _____ | Dialog _____ |
| Date Searcher Picked Up: <u>3/15/93</u> | Structure (#) <u>✓</u> _____ | Questel/Orbit _____ |
| Date Completed: <u>3/15/93</u> | Bibliographic _____ | Dr. Link _____ |
| Searcher Prep & Review Time: _____ | Litigation _____ | Lexis/Nexis _____ |
| Clerical Prep Time: <u>20</u> | Fulltext _____ | Sequence Systems _____ |
| Online Time: <u>190</u> | Patent Family _____ | WWW/Internet _____ |
| | Other _____ | Other (specify) _____ |

BioTech-Chem Library

Search Results

Feedback Form (Optional)



Scientific & Technical Information Center

The search results generated for your recent request are attached. If you have any questions or comments (compliments or complaints) about the scope or the results of the search, please contact *the BioTech-Chem searcher* who conducted the search *or contact*:

Mary Hale, Supervisor, 308-4258
CM-1 Room 1E01

Voluntary Results Feedback Form

➤ *I am an examiner in Workgroup:* (Example: 1610)

➤ *Relevant prior art **found**, search results used as follows:*

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

➤ *Relevant prior art **not found**:*

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Search results were not useful in determining patentability or understanding the invention.

Other Comments:

Drop off completed forms at the **Circulation Desk CM-1**, or send to Mary Hale, **CM1-1E01** or e-mail **mary.hale@uspto.gov**.

=> d his

(FILE 'HOME' ENTERED AT 13:39:53 ON 15 MAR 2003)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 13:40:25 ON 15 MAR 2003

L1 45 S E3,E8
 E HENDERSON L/AU
L2 123 S E3,E4,E6,E7
 E HENDERSON LOU/AU
L3 115 S E3,E6,E9-E11
 E ARTHUR L/AU
L4 18 S E3,E9
L5 61 S E45,E52,E53
 E REIN A/AU
L6 106 S E3,E6,E8
 E US600155/PN
 E US6001555/PN
L7 1 S E3
L8 1 S L1-L6 AND L7
 SEL RN

Jan Delaval
Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 - 703-308-4498
jan.delaval@uspto.gov

FILE 'REGISTRY' ENTERED AT 13:57:16 ON 15 MAR 2003

L9 56 S E1-E56
 E IRON, ION/CN
L10 1 S E67
 E COPPER, ION/CN
L11 1 S E55
L12 16 S 10102-43-9 OR 541-59-3 OR 137-26-8 OR 97-77-8 OR 4136-91-8 OR
L13 2 S L9 AND ZN/ELS
L14 2 S 7440-50-8 OR 7439-89-6
L15 36 S L9 NOT L10-L14
L16 28 S L15 AND S>=2
L17 48 S L10,L11,L12,L14,L16
L18 8 S L9 NOT L13,L17
L19 1 S L18 AND NC4/ES
L20 49 S L17,L19
L21 7 S L18 NOT L20
L22 1 S 156730-41-5
L23 50 S L20,L22

FILE 'HCAPLUS' ENTERED AT 14:25:59 ON 15 MAR 2003

L24 744102 S L23
 E DISULFIDE/CT
 E E7+ALL
L25 9262 S E3
 E E7+ALL
L26 2736 S E5
L27 32131 S E5+NT
 E HYDRAZIDE/CT
 E E10+ALL
L28 1940 S E3
L29 50477 S E3+NT
 E KETONE/CT
L30 613 S E111
L31 9512 S E141-E143,E154,E155
L32 5151 S KETONE#/CW (L) (HALID? OR HALO? OR CHLOR? OR FLUOR? OR IODO?
L33 46333 S E16
L34 49973 S KETONE#/CW
 E RETROVIR/CT
 E E6+ALL
L35 5912 S E4,E3

L36 50318 S E3+NT
 E LENTIVIR/CT
 E E5+ALL
 L37 39973 S E5,E4+NT
 E ONCOVIR/CT
 L38 32 S VIRUS?/CW (L) (ONCO OR ONCOVIR?)
 E HIV/CT
 E E5+ALL
 E E2+ALL
 L39 16946 S E7,E8,E6+NT
 E E5+ALL
 L40 37204 S E6,E5+NT
 L41 658 S L24-L34 AND L35-L40
 L42 62 S L13 AND L41
 L43 24 S (ZINC OR ZN) (L) FINGER AND L41
 L44 75 S L42,L43
 L45 3 S L41 AND CCHC
 L46 24 S L41 AND NUCLEOCAPSID?
 L47 85 S L41 AND (ZN OR ZINC)
 L48 90 S L44-L47
 L49 14 S L1-L6 AND L41

FILE 'REGISTRY' ENTERED AT 14:37:59 ON 15 MAR 2003

L50 1 S 2127-03-9

FILE 'HCAPLUS' ENTERED AT 14:39:09 ON 15 MAR 2003

L51 901 S L50
 L52 38 S 2(A)ALDRITHIOL
 L53 1 S NSC677438 OR NSC() (677438 OR 677 438)
 L54 49 S BIS 2 PYRID? DISULFIDE
 L55 239 S 2 PYRIDYL DISULFIDE
 L56 63 S 2 2 DITHIOBIS PYRIDINE
 L57 358 S 2 2 DIPYRID? DISULFIDE
 L58 196 S 2 2 DITHIODIPYRIDINE
 L59 68 S DI 2 PYRID? DISULFIDE
 L60 49 S BIS 2 PYRID? DISULFIDE
 L61 29 S L51-L60 AND L35-L40
 L62 10 S L61 AND (L13 OR ZINC OR ZN OR FINGER OR NUCLEOCAPSID? OR CCHC
 L63 110 S L48,L49,L8,L61,L62
 L64 42 S L63 AND (PY<=1995 OR PRY<=1995 OR AY<=1995)
 L65 40 S L63 AND (PD<=19950127 OR PRD<=19950127 OR AD<=19950127)
 L66 38 S L63 AND (PD<=19940923 OR PRD<=19940923 OR AD<=19940923)
 L67 38 S L66 AND L1-L8,L24-L49,L51-L66
 E ANTIVIRAL/CT
 E E5+ALL
 L68 19 S L67 AND E10,E11,E9+NT
 L69 8 S L67 AND INACTIV?
 L70 23 S L68,L69
 L71 15 S L67 NOT L70
 SEL DN AN L71 3 9
 L72 2 S E1-E6 AND L71
 L73 25 S L70,L72
 L74 24 S L73 AND (HIV? OR HUMAN(L) IMMUNODEFICIEN?(L) (VIRUS OR SYNDROM?
 L75 1 S L73 NOT L74
 L76 8 S L61,L62 AND (PY<=1995 OR PRY<=1995 OR AY<=1995)
 L77 2 S L76 NOT L74
 L78 24 S L74 AND L1-L8,L24-L49,L51-L77
 SEL HIT RN

FILE 'REGISTRY' ENTERED AT 14:52:36 ON 15 MAR 2003

L79 51 S E7-E57
 L80 49 S L79 NOT ZN/ELS

=> fil reg

FILE 'REGISTRY' ENTERED AT 14:53:10 ON 15 MAR 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 13 MAR 2003 HIGHEST RN 499099-49-9
DICTIONARY FILE UPDATES: 13 MAR 2003 HIGHEST RN 499099-49-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

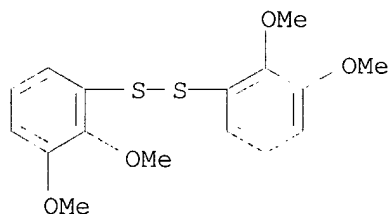
Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> d ide can tot 180

L80 ANSWER 1 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **178487-70-2** REGISTRY
CN Disulfide, bis(2,3-dimethoxyphenyl) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN NSC 677472
FS 3D CONCORD
MF C16 H18 O4 S2
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:73255

REFERENCE 2: 132:30812

REFERENCE 3: 125:184901

REFERENCE 4: 125:76341

L80 ANSWER 2 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **156730-41-5** REGISTRY

CN Benzamide, 3,3'-azoxybis- (9CI) (CA INDEX NAME)

OTHER NAMES:

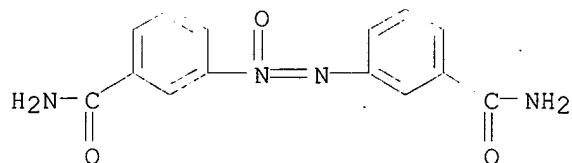
CN 3,3'-Azoxybenzamide

FS 3D CONCORD

MF C14 H12 N4 O3

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1962 TO DATE)

5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 132:30812

REFERENCE 2: 125:86322

REFERENCE 3: 124:260865

REFERENCE 4: 124:202044

REFERENCE 5: 121:99775

L80 ANSWER 3 OF 49 REGISTRY COPYRIGHT 2003 ACS

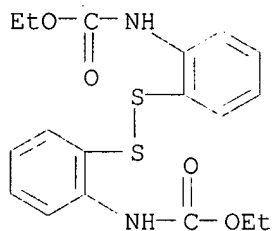
RN 72687-29-7 REGISTRY

CN Carbamic acid, (dithiodi-2,1-phenylene)bis-, diethyl ester (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C18 H20 N2 O4 S2

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMCATS, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1962 TO DATE)

5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:73255

REFERENCE 2: 132:30812

REFERENCE 3: 125:76341

REFERENCE 4: 107:134255

REFERENCE 5: 92:76429

L80 ANSWER 4 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN **66546-28-9** REGISTRY

CN Quinoline, 2,2'-dithiobis[4-methyl- (9CI) (CA INDEX NAME)

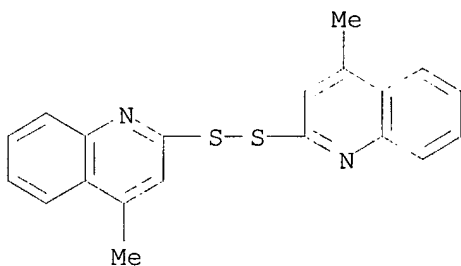
OTHER CA INDEX NAMES:

CN Lepidine, 2,2'-dithiodi- (6CI)

FS 3D CONCORD

MF C20 H16 N2 S2

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CHEMCATS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1962 TO DATE)

6 REFERENCES IN FILE CAPLUS (1962 TO DATE)

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 134:209141

REFERENCE 2: 134:110110

REFERENCE 3: 132:30812

REFERENCE 4: 125:76341

REFERENCE 5: 88:190565

REFERENCE 6: 55:2680

L80 ANSWER 5 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN **61747-35-1** REGISTRY

CN 1H-Imidazole, 2,2'-dithiobis[4-(1,1-dimethylethyl)-1-(1-methylethyl)-
(9CI) (CA INDEX NAME)

OTHER NAMES:

CN 2,2'-Dithiobis(4-tert-butyl-1-isopropylimidazole)

FS 3D CONCORD

MF C20 H34 N4 S2

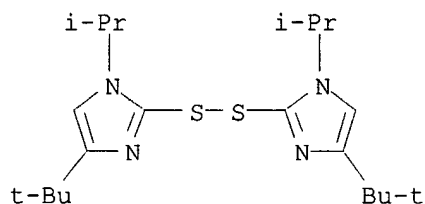
CI COM

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX,
CHEMLIST, MSDS-OHS, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

15 REFERENCES IN FILE CA (1962 TO DATE)
15 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:372678
REFERENCE 2: 135:46638
REFERENCE 3: 134:110110
REFERENCE 4: 133:90223
REFERENCE 5: 132:30812
REFERENCE 6: 129:12327
REFERENCE 7: 125:76341
REFERENCE 8: 116:230222
REFERENCE 9: 116:55101
REFERENCE 10: 114:237652

L80 ANSWER 6 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN **38262-57-6** REGISTRY

CN 1-Naphthalenamine, 2,2'-dithiobis- (9CI) (CA INDEX NAME)

OTHER NAMES:

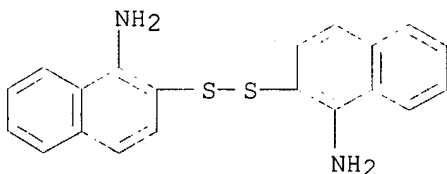
CN 2,2'-Dithiobis(1-aminonaphthalene)

FS 3D CONCORD

MF C20 H16 N2 S2

LC STN Files: BEILSTEIN*, BIOSIS, CA, CAPLUS, CHEMCATS, CSCHEM, MSDS-OHS,
USPATFULL

(*File contains numerically searchable property data)



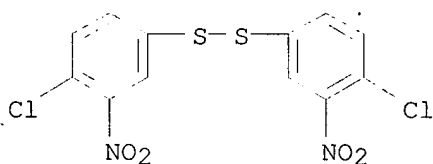
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

14 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
14 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:314860

REFERENCE 2: 132:30812
REFERENCE 3: 132:18252
REFERENCE 4: 125:76341
REFERENCE 5: 102:132013
REFERENCE 6: 101:125477
REFERENCE 7: 95:56899
REFERENCE 8: 93:90750
REFERENCE 9: 92:214435
REFERENCE 10: 92:190816

L80 ANSWER 7 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN 35964-48-8 REGISTRY
CN Disulfide, bis(4-chloro-3-nitrophenyl) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN NSC 677442
FS 3D CONCORD
MF C12 H6 Cl2 N2 O4 S2
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMCATS, CHEMLIST, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

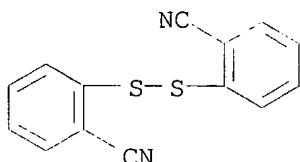
6 REFERENCES IN FILE CA (1962 TO DATE)
6 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 132:30812
REFERENCE 2: 126:225244
REFERENCE 3: 125:184901
REFERENCE 4: 125:76341
REFERENCE 5: 78:111007
REFERENCE 6: 76:112309

L80 ANSWER 8 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN 33174-74-2 REGISTRY
CN Benzonitrile, 2,2'-dithiobis- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzonitrile, 2,2'-dithiodi- (8CI)

OTHER NAMES:

CN 2,2'-Dicyanodiphenyl disulfide
CN Bis(2-cyanophenyl) disulfide
CN NSC 677458
FS 3D CONCORD
MF C14 H8 N2 S2
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMCATS, CSCHEM,
SYNTHLINE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

27 REFERENCES IN FILE CA (1962 TO DATE)
27 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:195511
REFERENCE 2: 132:293417
REFERENCE 3: 132:30812
REFERENCE 4: 131:144613
REFERENCE 5: 130:311765
REFERENCE 6: 129:41107
REFERENCE 7: 128:127653
REFERENCE 8: 127:332692
REFERENCE 9: 127:293160
REFERENCE 10: 127:248126

L80 ANSWER 9 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN **29581-98-4** REGISTRY

CN L-Cystine, N,N'-diformyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Cystine, N,N'-diformyl- (6CI)

CN Cystine, N,N'-diformyl-, L- (8CI)

OTHER NAMES:

CN N,N'-Diformyl-L-cystine

FS STEREOSEARCH

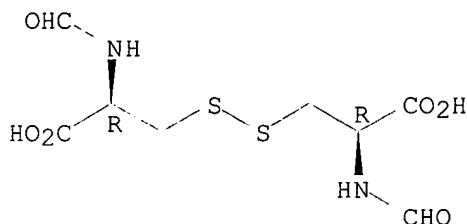
DR 816-91-1

MF C8 H12 N2 O6 S2

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, NIOSHTIC,
RTECS*, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

15 REFERENCES IN FILE CA (1962 TO DATE)
 15 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 6 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 132:30812
 REFERENCE 2: 125:76341
 REFERENCE 3: 118:120258
 REFERENCE 4: 116:174712
 REFERENCE 5: 109:149866
 REFERENCE 6: 78:58
 REFERENCE 7: 77:114857
 REFERENCE 8: 73:54325
 REFERENCE 9: 62:60733
 REFERENCE 10: 61:92659

L80 ANSWER 10 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN **29124-55-8** REGISTRY

CN Benzenamine, 2,2'-dithiobis[5-chloro- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Aniline, 2,2'-dithiobis[5-chloro- (7CI, 8CI)

OTHER NAMES:

CN 2,2'-Diamino-4,4'-dichlorodiphenyl disulfide

CN NSC 677447

FS 3D CONCORD

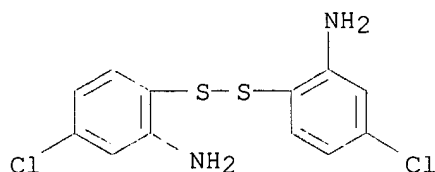
MF C12 H10 Cl2 N2 S2

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST,
 IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)

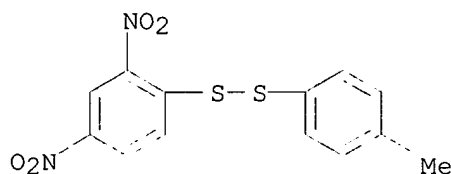


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

23 REFERENCES IN FILE CA (1962 TO DATE)
23 REFERENCES IN FILE CAPLUS (1962 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:73255
REFERENCE 2: 135:314860
REFERENCE 3: 135:298211
REFERENCE 4: 132:30812
REFERENCE 5: 125:184901
REFERENCE 6: 125:76341
REFERENCE 7: 101:55079
REFERENCE 8: 99:87826
REFERENCE 9: 92:128024
REFERENCE 10: 92:6226

L80 ANSWER 11 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **24696-61-5** REGISTRY
CN Disulfide, 2,4-dinitrophenyl 4-methylphenyl (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Disulfide, 2,4-dinitrophenyl p-tolyl (6CI, 7CI, 8CI)
OTHER NAMES:
CN 2,4-Dinitro-4'-methyldiphenyl disulfide
CN 2,4-Dinitrophenyl p-tolyl disulfide
FS 3D CONCORD
MF C13 H10 N2 O4 S2
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

13 REFERENCES IN FILE CA (1962 TO DATE)
13 REFERENCES IN FILE CAPLUS (1962 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 134:11677
REFERENCE 2: 132:30812
REFERENCE 3: 131:184867
REFERENCE 4: 125:76341

REFERENCE 5: 105:60256
REFERENCE 6: 100:173968
REFERENCE 7: 97:162494
REFERENCE 8: 87:22643
REFERENCE 9: 80:59114
REFERENCE 10: 79:115715

L80 ANSWER 12 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN **20201-05-2** REGISTRY

CN Disulfide, bis(2-chloro-5-nitrophenyl) (6CI, 8CI, 9CI) (CA INDEX NAME)

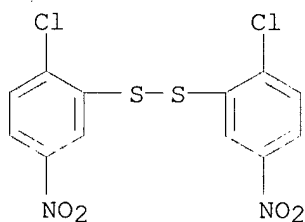
OTHER NAMES:

CN Bis(2-chloro-5-nitrophenyl) disulfide

FS 3D CONCORD

MF C12 H6 Cl2 N2 O4 S2

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CHEMCATS, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

9 REFERENCES IN FILE CA (1962 TO DATE)
9 REFERENCES IN FILE CAPLUS (1962 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:355021
REFERENCE 2: 132:30812
REFERENCE 3: 132:3248
REFERENCE 4: 125:76341
REFERENCE 5: 100:174748
REFERENCE 6: 76:112309
REFERENCE 7: 68:104454
REFERENCE 8: 52:15653
REFERENCE 9: 52:15652

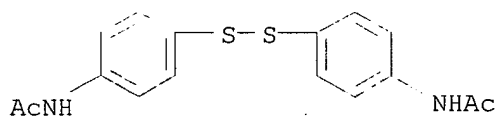
L80 ANSWER 13 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN **16766-09-9** REGISTRY

CN Acetamide, N,N'-(dithiodi-4,1-phenylene)bis- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Acetanilide, 4',4'''-dithiobis- (8CI)
 OTHER NAMES:
 CN Bis(4-acetamidophenyl) disulfide
 CN Bis(4-acetylaminophenyl) disulfide
 FS 3D CONCORD
 MF C16 H16 N2 O2 S2
 CI COM
 LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, IFICDB, IFIPAT, IFIUDB, SPECINFO, TOXCENTER, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

49 REFERENCES IN FILE CA (1962 TO DATE)
 49 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:170116
 REFERENCE 2: 137:208256
 REFERENCE 3: 135:222516
 REFERENCE 4: 134:35008
 REFERENCE 5: 132:87659
 REFERENCE 6: 132:30812
 REFERENCE 7: 131:191285
 REFERENCE 8: 130:189205
 REFERENCE 9: 130:59012
 REFERENCE 10: 128:294743

L80 ANSWER 14 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN **15658-35-2** REGISTRY

CN 3-Pyridinecarboxylic acid, 6,6'-dithiobis- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Nicotinic acid, 6,6'-dithiodi- (8CI)

OTHER NAMES:

CN 6,6'-Dithiodinicotinic acid

CN 6,6'-Dithionicotinic acid

CN Carboxypyridine disulfide

CN CPDS

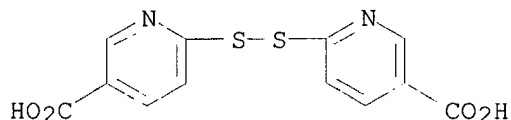
FS 3D CONCORD

MF C12 H8 N2 O4 S2

CI COM

LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, PHAR, RTECS*, SYNTHLINE, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

132 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
133 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:224054

REFERENCE 2: 137:103886

REFERENCE 3: 137:73255

REFERENCE 4: 136:264577

REFERENCE 5: 136:235631

REFERENCE 6: 136:61567

REFERENCE 7: 135:372678

REFERENCE 8: 134:245193

REFERENCE 9: 134:110110

REFERENCE 10: 134:39177

L80 ANSWER 15 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN **14807-75-1** REGISTRY

CN Thioperoxydicarbonimidic diamide ([(H₂N)C(NH)]₂S₂), dihydrochloride (9CI)
(CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Formamidine, 1,1'-dithiodi-, dihydrochloride (7CI, 8CI)

OTHER NAMES:

CN .alpha.,.alpha.'-Dithiobisformamidinium dichloride

CN 1,1'-Dithiodiformamidine hydrochloride

CN C,C'-Dithiodiformamidinium dichloride

CN Di-formamidine disulfide dihydrochloride

CN Dithiobis[diaminomethylcarbonium chloride]

CN Dithioformamidine dihydrochloride

CN Formamidine disulfide dihydrochloride

DR 35468-36-1

MF C₂ H₆ N₄ S₂ . 2 Cl H

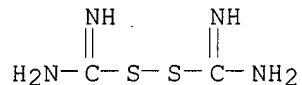
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST,
CSCHEM, GMELIN*, RTECS*, SPECINFO, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**, NDSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

CRN (3256-06-2)



●2 HCl

41 REFERENCES IN FILE CA (1962 TO DATE)
41 REFERENCES IN FILE CAPLUS (1962 TO DATE)
3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:69532
REFERENCE 2: 135:129593
REFERENCE 3: 135:76571
REFERENCE 4: 132:30812
REFERENCE 5: 132:27713
REFERENCE 6: 125:76341
REFERENCE 7: 124:307619
REFERENCE 8: 124:260207
REFERENCE 9: 110:94495
REFERENCE 10: 109:92107

L80 ANSWER 16 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN **14756-51-5** REGISTRY

CN Disulfide, 4-methylphenyl 4-nitrophenyl (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Disulfide, p-nitrophenyl p-tolyl (7CI, 8CI)

OTHER NAMES:

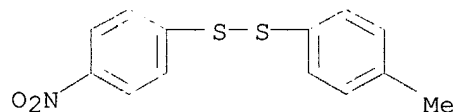
CN p-Nitrophenyl p-tolyl disulfide

FS 3D CONCORD

MF C13 H11 N O2 S2

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, TOXCENTER,
USPATFULL

(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

15 REFERENCES IN FILE CA (1962 TO DATE)
15 REFERENCES IN FILE CAPLUS (1962 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:128478

REFERENCE 2: 135:298211
REFERENCE 3: 132:30812
REFERENCE 4: 130:273973
REFERENCE 5: 125:57694
REFERENCE 6: 123:338868
REFERENCE 7: 109:109942
REFERENCE 8: 106:17996
REFERENCE 9: 101:130324
REFERENCE 10: 88:49876

L80 ANSWER 17 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 14370-67-3 REGISTRY

CN Disulfoxide, bis(4-methylphenyl) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN p-Tolyl disulfoxide (6CI, 7CI, 8CI)

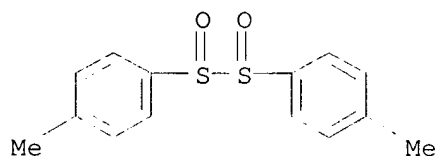
OTHER NAMES:

CN NSC 677464

FS 3D CONCORD

MF C14 H14 O2 S2

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CHEMCATS, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

9 REFERENCES IN FILE CA (1962 TO DATE)
9 REFERENCES IN FILE CAPLUS (1962 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 132:347661
REFERENCE 2: 132:30812
REFERENCE 3: 130:52010
REFERENCE 4: 125:247552
REFERENCE 5: 125:184901
REFERENCE 6: 125:76341
REFERENCE 7: 81:25294
REFERENCE 8: 66:75789

REFERENCE 9: 61:69386

L80 ANSWER 18 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 14193-38-5 REGISTRY

CN 1,2-Dithiane-4,5-diol, (4R,5R)-rel- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,2-Dithiane-4,5-diol, trans-

CN o-Dithiane-4,5-diol, trans- (7CI, 8CI)

OTHER NAMES:

CN (.+-.)-trans-1,2-Dithiane-4,5-diol

CN NSC 663605

CN trans-1,2-Dithiane-4,5-diol

CN trans-4,5-Dihydroxy-1,2-dithiane

CN trans-4,5-Dihydroxy-o-dithiane

FS STEREOSEARCH

DR 24891-61-0, 17307-14-1, 86023-22-5

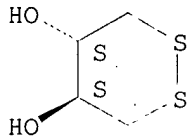
MF C4 H8 O2 S2

LC STN Files: BEILSTEIN*, BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS,
CHEMINFORMRX, CHEMLIST, CSCHEM, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Other Sources: EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)

Relative stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

86 REFERENCES IN FILE CA (1962 TO DATE)

2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

86 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:132120

REFERENCE 2: 138:72813

REFERENCE 3: 138:29520

REFERENCE 4: 137:337841

REFERENCE 5: 137:334003

REFERENCE 6: 137:210070

REFERENCE 7: 137:73255

REFERENCE 8: 137:57578

REFERENCE 9: 137:32952

REFERENCE 10: 136:239522

L80 ANSWER 19 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 10102-43-9 REGISTRY

CN Nitrogen oxide (NO) (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN Amidogen, oxo-
CN INOmax
CN Nitric oxide
CN Nitric oxide (NO)
CN Nitric oxide trimer
CN Nitrogen monooxide
CN Nitrogen monoxide
CN Nitrogen oxide (N4O4)
CN Nitrogen(II) oxide
CN Nitrosyl radical
CN OHM 11771
DR 53851-19-7, 51005-20-0, 51005-21-1, 90452-29-2
MF N O
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,
CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS,
CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*,
DIOGENES, DIPPR*, DRUGU, DRUGUPDATES, EMBASE, ENCOMPLIT, ENCOMPLIT2,
ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA,
MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*,
SPECINFO, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(*Enter CHEMLIST File for up-to-date regulatory information)

N=O

70401 REFERENCES IN FILE CA (1962 TO DATE)
429 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
70470 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:179861
REFERENCE 2: 138:179286
REFERENCE 3: 138:179274
REFERENCE 4: 138:179265
REFERENCE 5: 138:178660
REFERENCE 6: 138:177956
REFERENCE 7: 138:177802
REFERENCE 8: 138:177689
REFERENCE 9: 138:177481
REFERENCE 10: 138:177429

L80 ANSWER 20 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN 7440-50-8 REGISTRY
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 100RXH
CN 1100T
CN 115A
CN 1721 Gold
CN 200RL
CN 22BB400

CN 2L3GT
CN 3EC
CN 3EC-HTE
CN 3EC-III
CN 3EC-VLP
CN 3EC3
CN 3L Fire
CN Allbri Natural Copper
CN Arwood copper
CN BHN
CN BHN 02T
CN BHY 02B-T
CN BHY 13HT
CN BHY 13T
CN BHY 22B-T
CN BPF 18
CN BSH
CN BSH (metal)
CN C 100
CN C 100 (metal)
CN C.I. 77400
CN C.I. Pigment Metal 2
CN CCL-HL 830
CN CDX
CN CDX (metal)
CN CE 1100
CN CE 1110
CN CE 115
CN CE 15
CN CE 25
CN CE 7
CN CE 7 (metal)
CN CE 8A
CN CF 78
CN CF-T 8
CN Copper element
CN Copper Powder
CN CS-F 150E
CN CT 315E
CN CU 112
CN Cu-At-W 250
CN CU-FN 10
CN Cu-HWQ
CN CuEP

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for
DISPLAY

DR 133353-46-5, 133353-47-6, 65555-90-0, 72514-83-1, 195161-80-9

MF Cu

CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BIOBUSINESS, BIOSIS,
BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,
CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU,
DETERM*, DIOGENES, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT,
ENCOMPPAT2, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*,
MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, TOXCENTER, TULSA,
ULIDAT, USPAT2, USPATFULL, VETU, VTB

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

Cu

404097 REFERENCES IN FILE CA (1962 TO DATE)
21001 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
404235 REFERENCES IN FILE CAPLUS (1962 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:179883
REFERENCE 2: 138:179880
REFERENCE 3: 138:179879
REFERENCE 4: 138:179845
REFERENCE 5: 138:179816
REFERENCE 6: 138:179814
REFERENCE 7: 138:179780
REFERENCE 8: 138:179771
REFERENCE 9: 138:179717
REFERENCE 10: 138:179714

L80 ANSWER 21 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 7439-89-6 REGISTRY

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN 300A
CN 3ZhP
CN A 227
CN Ancor B
CN Ancor EN 80/150
CN AQ 80
CN Armco iron
CN Armco-80
CN Atomel 300M200
CN Atomel 500M
CN Atomet 28
CN Atomet 95
CN Atomet 95G
CN Atomiron 44MR
CN Atomiron 5M
CN Atomiron AFP 25
CN Atomiron AFP 5
CN ATW 230
CN ATW 432
CN BASF-EW
CN Carbon 0.17, iron 99.83 (atomic)
CN Carbonyl iron
CN Copy Powder CS 105-175
CN DH
CN Diseases (animal), iron overload
CN Diseases, iron overload
CN DSP 1000
CN DSP 128B
CN DSP 135
CN DSP 135C
CN DSP 138
CN EF 1000
CN EF 250

CN EFV
CN EFV 200/300
CN EFV 250
CN EFV 250/400
CN EO 5A
CN F 60
CN F 60 (metal)
CN Ferrovac E
CN FT 3
CN FT 3 (element)
CN GS 6
CN HF 2
CN HF 2 (element)
CN HL (iron)
CN Hoeganaes ATW 230
CN Hoeganaes EH
CN HQ

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for
DISPLAY

DR 8011-79-8, 8053-60-9, 129048-51-7, 73135-38-3, 70884-35-4, 39344-71-3,
190454-13-8, 195161-83-2, 199281-22-6, 443783-52-6

MF Fe

CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BIOBUSINESS, BIOSIS,
BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,
CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*,
DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT,
ENCOMPPAT2, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*,
MSDS-OHS, NIOSHTIC, PHARMASEARCH, PIRA, PROMT, RTECS*, TOXCENTER, TULSA,
ULIDAT, USPAT2, USPATFULL, VETU, VTB

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

Fe

330754 REFERENCES IN FILE CA (1962 TO DATE)
17983 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
330866 REFERENCES IN FILE CAPLUS (1962 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:179880

REFERENCE 2: 138:179879

REFERENCE 3: 138:179862

REFERENCE 4: 138:179853

REFERENCE 5: 138:179848

REFERENCE 6: 138:179845

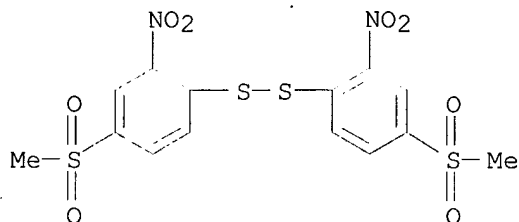
REFERENCE 7: 138:179818

REFERENCE 8: 138:179781

REFERENCE 9: 138:179771

REFERENCE 10: 138:179738

L80 ANSWER 22 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN 7038-49-5 REGISTRY
CN Disulfide, bis[4-(methylsulfonyl)-2-nitrophenyl] (7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN NSC 677463
FS 3D CONCORD
MF C14 H12 N2 O8 S4
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CHEMCATS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

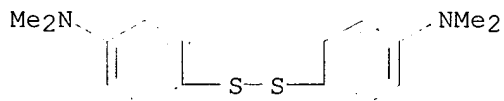


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1962 TO DATE)
6 REFERENCES IN FILE CAPLUS (1962 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 132:30812
REFERENCE 2: 125:184901
REFERENCE 3: 76:99646
REFERENCE 4: 71:49957
REFERENCE 5: 65:82328
REFERENCE 6: 65:47747

L80 ANSWER 23 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN 5397-29-5 REGISTRY
CN Benzenamine, 4,4'-dithiobis[N,N-dimethyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Aniline, 4,4'-dithiobis[N,N-dimethyl- (6CI, 7CI, 8CI)
OTHER NAMES:
CN Bis[4-(dimethylamino)phenyl] disulfide
CN Bis[p-(dimethylamino)phenyl] disulfide
CN Di-p-dimethylaminophenyl disulfide
FS 3D CONCORD
MF C16 H20 N2 S2
CI COM
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, IFICDB, IFIPAT, IFIUDB, RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

44 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
44 REFERENCES IN FILE CAPLUS (1962 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:128478
REFERENCE 2: 137:73255
REFERENCE 3: 135:254112
REFERENCE 4: 134:280435
REFERENCE 5: 133:50111
REFERENCE 6: 132:30812
REFERENCE 7: 130:239851
REFERENCE 8: 125:76341
REFERENCE 9: 125:58018
REFERENCE 10: 124:55068

L80 ANSWER 24 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN **4490-97-5** REGISTRY

CN Acetamide, N,N'-(dithiodi-2,1-phenylene)bis- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Acetanilide, 2',2''-dithiobis- (7CI, 8CI)

OTHER NAMES:

CN Bis(2-acetamidophenyl) disulfide

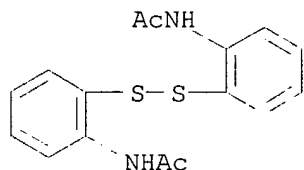
CN Bis(2-acetylaminophenyl) disulfide

FS 3D CONCORD

MF C16 H16 N2 O2 S2

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, IFICDB, IFIPAT, IFIUDB,
TOXCENTER, USPAT2, USPATFULL

(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

29 REFERENCES IN FILE CA (1962 TO DATE)
29 REFERENCES IN FILE CAPLUS (1962 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:263582
REFERENCE 2: 136:5804

REFERENCE 3: 133:321682
REFERENCE 4: 133:232370
REFERENCE 5: 132:30812
REFERENCE 6: 129:175448
REFERENCE 7: 128:69934
REFERENCE 8: 127:154564
REFERENCE 9: 126:205418
REFERENCE 10: 125:315100

L80 ANSWER 25 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 4136-91-8 REGISTRY

CN Thioperoxydicarbonic diamide ([(H2N)C(S)]2S2), tetrakis(1-methylethyl)-
(9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Disulfide, bis(diisopropylthiocarbamoyl) (6CI, 7CI, 8CI)

OTHER NAMES:

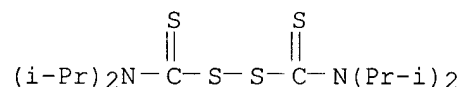
CN N,N,N',N'-Tetraisopropylthiuram disulfide

CN Tetraisopropylthiuram disulfide

FS 3D CONCORD

MF C14 H28 N2 S4

LC STN Files: AQUIRE, BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,
CSCHEM, GMELIN*, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

64 REFERENCES IN FILE CA (1962 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

64 REFERENCES IN FILE CAPLUS (1962 TO DATE)

6 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:370178
REFERENCE 2: 134:222836
REFERENCE 3: 134:24820
REFERENCE 4: 132:302454
REFERENCE 5: 132:166336
REFERENCE 6: 132:30812
REFERENCE 7: 131:234746
REFERENCE 8: 129:12327
REFERENCE 9: 127:81733

REFERENCE 10: 126:206782

L80 ANSWER 26 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 3808-87-5 REGISTRY

CN Disulfide, bis(2,4,5-trichlorophenyl) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN Bis(2,4,5-trichlorophenyl) disulfide

CN NSC 238936

FS 3D CONCORD

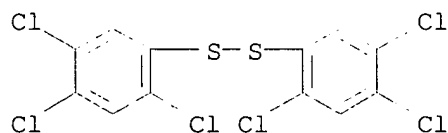
MF C12 H4 Cl6 S2

LC STN Files: AQUIRE, BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, HODOC*, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

43 REFERENCES IN FILE CA (1962 TO DATE)

43 REFERENCES IN FILE CAPLUS (1962 TO DATE)

9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:4518

REFERENCE 2: 134:237657

REFERENCE 3: 134:17469

REFERENCE 4: 132:293840

REFERENCE 5: 132:30812

REFERENCE 6: 131:310538

REFERENCE 7: 131:195525

REFERENCE 8: 131:6450

REFERENCE 9: 127:289795

REFERENCE 10: 126:174104

L80 ANSWER 27 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 3696-28-4 REGISTRY

CN Pyridine, 2,2'-dithiobis-, 1,1'-dioxide (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Pyridine, 2,2'-dithiodi-, 1,1'-dioxide (6CI, 7CI, 8CI)

OTHER NAMES:

CN (1-Oxo-2-pyridyl) disulfide

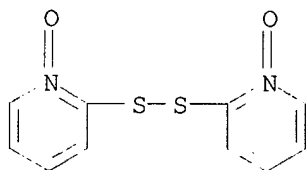
CN 2,2'-Dipyridyl disulfide bis-N-oxide

CN 2,2'-Dipyridyl disulfide N,N'-bisoxide

CN 2,2'-Dithiobis(pyridine 1-oxide)

CN 2,2'-Dithiobis(pyridine N-oxide)

CN 2,2'-Dithiobispyridine 1,1'-dioxide
 CN 2,2'-Dithiodipyridine 1,1'-dioxide
 CN Bis(2-pyridine-N-oxide)disulfide
 CN Bis(2-pyridyl 1-oxide) disulfide
 CN Bis(2-pyridyl) disulfide di-N-oxide
 CN Bis(2-pyridyl-N-oxide) disulfide
 CN Bis(N-oxido-2-pyridyl) disulfide
 CN Di-2-pyridyl disulfide N,N'-dioxide
 CN Dipyrithione
 CN NSC 677437
 CN Omadine disulfide
 CN Omadine DS
 CN OMDS
 CN OSY 20
 FS 3D CONCORD
 DR 90829-79-1
 MF C10 H8 N2 O2 S2
 CI COM
 LC STN Files: BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT,
 CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, DDFU, DRUGU, EMBASE, HODOC*,
 IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, RTECS*, SPECINFO, TOXCENTER, USAN,
 USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: EINECS**, NDSL**, TSCA**, WHO
 (**Enter CHEMLIST File for up-to-date regulatory information)

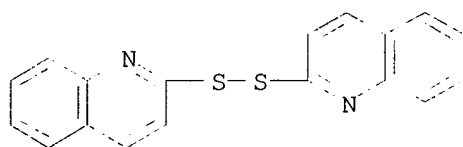


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

266 REFERENCES IN FILE CA (1962 TO DATE)
 17 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 268 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 24 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:111679
 REFERENCE 2: 137:224054
 REFERENCE 3: 137:149237
 REFERENCE 4: 137:147714
 REFERENCE 5: 137:141786
 REFERENCE 6: 137:129323
 REFERENCE 7: 137:101464
 REFERENCE 8: 137:5853
 REFERENCE 9: 136:393181
 REFERENCE 10: 136:365282

L80 ANSWER 28 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN 2889-13-6 REGISTRY
CN Quinoline, 2,2'-dithiobis- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Quinoline, 2,2'-dithiodi- (6CI, 7CI, 8CI)
OTHER NAMES:
CN 2,2'-Dithiodiquinoline
CN NSC 677473
FS 3D CONCORD
DR 137376-18-2
MF C18 H12 N2 S2
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX,
TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



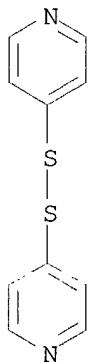
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

23 REFERENCES IN FILE CA (1962 TO DATE)
23 REFERENCES IN FILE CAPLUS (1962 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 132:30812
REFERENCE 2: 127:359105
REFERENCE 3: 127:50552
REFERENCE 4: 126:171184
REFERENCE 5: 126:8006
REFERENCE 6: 125:266044
REFERENCE 7: 125:221031
REFERENCE 8: 125:184901
REFERENCE 9: 125:76341
REFERENCE 10: 119:197869

L80 ANSWER 29 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN 2645-22-9 REGISTRY
CN Pyridine, 4,4'-dithiobis- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Pyridine, 4,4'-dithiodi- (6CI, 7CI, 8CI)
OTHER NAMES:
CN 4,4'-Bipyridyl disulfide
CN 4,4'-Dipyridine disulfide
CN 4,4'-Dipyridyl disulfide
CN 4,4'-Dithiobispyridine
CN 4,4'-Dithiodipyridine
CN 4,4'-Dithiopyridine
CN 4-Pyridyl disulfide

CN Aldrithiol 4
CN Bis(4-pyridinyl) disulfide
CN Bis(4-pyridyl) disulfide
CN Di(4-Pyridyl) disulfide
FS 3D CONCORD
MF C10 H8 N2 S2
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CANCERLIT,
CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM,
EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, MEDLINE, SPECINFO, TOXCENTER,
USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



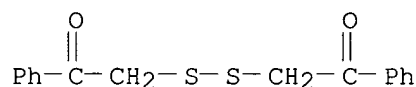
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

293 REFERENCES IN FILE CA (1962 TO DATE)
8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
293 REFERENCES IN FILE CAPLUS (1962 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:142431
REFERENCE 2: 137:347517
REFERENCE 3: 137:259575
REFERENCE 4: 137:152038
REFERENCE 5: 137:100411
REFERENCE 6: 137:73255
REFERENCE 7: 137:63334
REFERENCE 8: 137:29574
REFERENCE 9: 137:15417
REFERENCE 10: 137:5854

L80 ANSWER 30 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN 2461-75-8 REGISTRY

CN Ethanone, 2,2'-dithiobis[1-phenyl- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Acetophenone, 2,2''-dithiodi- (6CI, 7CI, 8CI)
 OTHER NAMES:
 CN Diphenacyl disulfide
 CN NSC 677471
 CN Phenacyl disulfide
 FS 3D CONCORD
 MF C16 H14 O2 S2
 LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,
 TOXCENTER, USPATFULL
 (*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

24 REFERENCES IN FILE CA (1962 TO DATE)
 24 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 6 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:73255
 REFERENCE 2: 135:210832
 REFERENCE 3: 132:30812
 REFERENCE 4: 129:289733
 REFERENCE 5: 125:184901
 REFERENCE 6: 125:76341
 REFERENCE 7: 124:145533
 REFERENCE 8: 122:160173
 REFERENCE 9: 110:173952
 REFERENCE 10: 106:210170

L80 ANSWER 31 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 2127-03-9 REGISTRY

CN Pyridine, 2,2'-dithiobis- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:

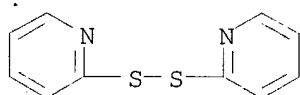
CN Pyridine, 2,2'-dithiodi- (6CI, 7CI, 8CI)
 OTHER NAMES:

CN 2,2'-Dipyridinyl disulfide
 CN 2,2'-Dipyridyl disulfide
 CN 2,2'-Dithiobis(pyridine) → *by disulfide*
 CN 2,2'-Dithiodipyridine
 CN 2-Aldrithiol
 CN 2-Pyridyl disulfide

CN Aldrithiol 2

CN Bis(2-pyridinyl) disulfide
 CN Bis(2-pyridyl) disulfide
 CN Di-2-pyridyl disulfide
 CN NSC 677438

FS 3D CONCORD
 DR 219143-69-8
 MF C10 H8 N2 S2
 CI COM
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
 BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS,
 CHEMINFORMRX, CHEMLIST, CSCHEM, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB,
 IPA, MEDLINE, NIOSHTIC, PROMT, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2,
 USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: EINECS**
 (**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

895 REFERENCES IN FILE CA (1962 TO DATE)
 21 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 899 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:170116
 REFERENCE 2: 138:162574
 REFERENCE 3: 138:149584
 REFERENCE 4: 138:83329
 REFERENCE 5: 138:72958
 REFERENCE 6: 138:72813
 REFERENCE 7: 138:17675
 REFERENCE 8: 138:14152
 REFERENCE 9: 138:4809
 REFERENCE 10: 137:384772

L80 ANSWER 32 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 1634-02-2 REGISTRY

CN Thioperoxydicarbonic diamide ([(H2N)C(S)]2S2), tetrabutyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Disulfide, bis(dibutylthiocarbamoyl) (6CI, 7CI, 8CI)

OTHER NAMES:

CN Bis(dibutylthiocarbamoyl) disulfide

CN Butyl Tuads

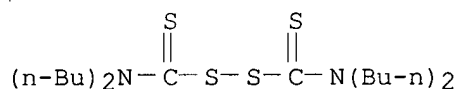
CN E-BT 55

CN Methanethioamide, 1,1'-dithiobis[N,N-dibutyl-

CN N,N,N',N'-Tetrabutylthiuram disulfide

CN Nocceler TBT

CN Nocceler TBT-N
 CN NSC 677476
 CN Robac TBUT
 CN Tetrabutylthiuram disulfide
 FS 3D CONCORD
 MF C18 H36 N2 S4
 CI COM
 LC STN Files: AQUIRE, BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT,
 CHEMCATS, CHEMLIST, CIN, CSCHEM, CSNB, HODOC*, IFICDB, IFIPAT, IFIUDB,
 RTECS*, SPECINFO, TOXCENTER, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)



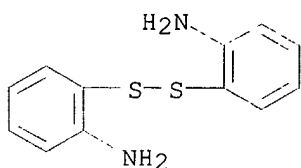
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

221 REFERENCES IN FILE CA (1962 TO DATE)
 222 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 14 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:154892
 REFERENCE 2: 138:141877
 REFERENCE 3: 138:141876
 REFERENCE 4: 137:331763
 REFERENCE 5: 137:325140
 REFERENCE 6: 137:94624
 REFERENCE 7: 137:1669
 REFERENCE 8: 136:410676
 REFERENCE 9: 136:351518
 REFERENCE 10: 136:341988

L80 ANSWER 33 OF 49 REGISTRY COPYRIGHT 2003 ACS
 RN 1141-88-4 REGISTRY
 CN Benzenamine, 2,2'-dithiobis- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Aniline, 2,2'-dithiodi- (6CI, 7CI, 8CI)
 OTHER NAMES:
 CN 1,1'-Dithiobis(2-aminobenzene)
 CN 2,2'-Diaminodiphenyl disulfide
 CN 2,2'-Dithiobis[aniline]
 CN 2,2'-Dithiobis[benzenamine]
 CN 2,2'-Dithiodianiline
 CN Bis(2-aminophenyl) disulfide
 CN Bis(o-aminophenyl) disulfide
 CN Di(2-aminophenyl) disulfide
 CN Di(o-aminophenyl) disulfide
 CN Disulfide, bis(2-aminophenyl)

CN Intramine
CN NSC 8186
CN o,o'-Diaminodiphenyl disulfide
FS 3D CONCORD
MF C12 H12 N2 S2
CI COM
LC STN Files: BEILSTEIN*, BIOSIS, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT,
CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, GMELIN*, HODOC*, IFICDB,
IFIPAT, IFIUDB, MEDLINE, NIOSHTIC, RTECS*, SPECINFO, SYNTHLINE,
TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

347 REFERENCES IN FILE CA (1962 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
348 REFERENCES IN FILE CAPLUS (1962 TO DATE)
31 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:161022
REFERENCE 2: 138:89882
REFERENCE 3: 138:28829
REFERENCE 4: 137:269695
REFERENCE 5: 137:269670
REFERENCE 6: 137:232174
REFERENCE 7: 137:217172
REFERENCE 8: 137:132040
REFERENCE 9: 137:73255
REFERENCE 10: 137:6162

L80 ANSWER 34 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN 1119-62-6 REGISTRY
CN Propanoic acid, 3,3'-dithiobis- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Propionic acid, 3,3'-dithiodi- (6CI, 7CI, 8CI)
OTHER NAMES:
CN .beta.,.beta.'-Dithiodipropionic acid
CN 2-Carboxyethyl disulfide
CN 3,3'-Dithiodipropionic acid
CN 3,3'-Dithiodipropionic acid

CN 3,3-Dithiobispropionic acid
CN Bis(2-carboxyethyl)disulfide
CN NSC 677544
FS 3D CONCORD
MF C6 H10 O4 S2
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, CA, CAOLD,
CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, DETHERM*, HODOC*, IFICDB,
IFIPAT, IFIUDB, NIOSHTIC, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

HO2C-CH2-CH2-S-S-CH2-CH2-CO2H

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

332 REFERENCES IN FILE CA (1962 TO DATE)
32 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
333 REFERENCES IN FILE CAPLUS (1962 TO DATE)
34 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:170116
REFERENCE 2: 138:164911
REFERENCE 3: 138:56873
REFERENCE 4: 137:375142
REFERENCE 5: 137:365926
REFERENCE 6: 137:365296
REFERENCE 7: 137:326340
REFERENCE 8: 137:257647
REFERENCE 9: 137:217315
REFERENCE 10: 137:216633

L80 ANSWER 35 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 882-33-7 REGISTRY

CN Disulfide, diphenyl (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Phenyl disulfide (8CI)

OTHER NAMES:

CN Biphenyl disulfide

CN Diphenyl disulfide

CN Diphenyl disulphide

FS 3D CONCORD

MF C12 H10 S2

CI COM

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS,
BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS,
CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM*, DRUGU, EMBASE,
ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, IFICDB,
IFIPAT, IFIUDB, MEDLINE, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO,
SYNTHLINE, TOXCENTER, USPAT2, USPATFULL

(*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)

Ph-S-S-Ph

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3131 REFERENCES IN FILE CA (1962 TO DATE)
 14 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 3137 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 41 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:170568
 REFERENCE 2: 138:170116
 REFERENCE 3: 138:153136
 REFERENCE 4: 138:144020
 REFERENCE 5: 138:137388
 REFERENCE 6: 138:137371
 REFERENCE 7: 138:136944
 REFERENCE 8: 138:136688
 REFERENCE 9: 138:124213
 REFERENCE 10: 138:122683

L80 ANSWER 36 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 644-32-6 REGISTRY

CN Disulfide, dibenzoyl (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzoyl disulfide (6CI, 7CI, 8CI)

OTHER NAMES:

CN Bensulfenum

CN Benthiolan

CN Dibenzoyl disulfide

CN NSC 677460

CN Septiolan

CN Thiocutol

FS 3D CONCORD

MF C14 H10 O2 S2

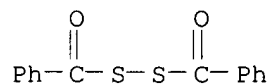
CI COM

LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,
 CHEMINFORMRX, CHEMLIST, CSCHEM, DDFU, DRUGU, GMELIN*, HODOC*, IFICDB,
 IFIPAT, IFIUDB, IPA, RTECS*, SPECINFO, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

142 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
142 REFERENCES IN FILE CAPLUS (1962 TO DATE)
27 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:170568
REFERENCE 2: 137:141654
REFERENCE 3: 135:24675
REFERENCE 4: 133:89319
REFERENCE 5: 132:87659
REFERENCE 6: 132:30812
REFERENCE 7: 131:222770
REFERENCE 8: 131:136787
REFERENCE 9: 130:351899
REFERENCE 10: 130:244468

L80 ANSWER 37 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN 589-32-2 REGISTRY
CN Ethanamine, 2,2'-dithiobis[N,N-diethyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Triethylamine, 2,2'''-dithiobis- (6CI, 7CI, 8CI)
OTHER NAMES:
CN 2,2'''-Dithiobistriethylamine
CN 6,7-Dithia-3,10-diazadodecane, 3,10-diethyl-
CN N,N,N',N'-Tetraethylcystamine
CN Tetraethylcystamine
FS 3D CONCORD
MF C12 H28 N2 S2
CI COM
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX,
IFICDB, IFIPAT, IFIUDB, RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

$\text{Et}_2\text{N}-\text{CH}_2-\text{CH}_2-\text{S}-\text{S}-\text{CH}_2-\text{CH}_2-\text{NEt}_2$

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

65 REFERENCES IN FILE CA (1962 TO DATE)
65 REFERENCES IN FILE CAPLUS (1962 TO DATE)
14 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:345465
REFERENCE 2: 134:38021
REFERENCE 3: 132:30812

REFERENCE 4: 131:59141
REFERENCE 5: 130:261228
REFERENCE 6: 129:149255
REFERENCE 7: 127:135859
REFERENCE 8: 126:27772
REFERENCE 9: 125:76341
REFERENCE 10: 121:2763

L80 ANSWER 38 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 541-59-3 REGISTRY

CN 1H-Pyrrole-2,5-dione (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Maleimide (6CI, 8CI)

OTHER NAMES:

CN 3-Pyrroline-2,5-dione

CN Maleic imide

CN Pyrrole-2,5-dione

FS 3D CONCORD

MF C4 H3 N O2

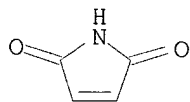
CI COM

LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DETHERM*, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1779 REFERENCES IN FILE CA (1962 TO DATE)

638 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1781 REFERENCES IN FILE CAPLUS (1962 TO DATE)

33 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:170042
REFERENCE 2: 138:169882
REFERENCE 3: 138:169881
REFERENCE 4: 138:166204
REFERENCE 5: 138:160900
REFERENCE 6: 138:152266

REFERENCE 7: 138:148786

REFERENCE 8: 138:147616

REFERENCE 9: 138:119557

REFERENCE 10: 138:107375

L80 ANSWER 39 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 537-91-7 REGISTRY

CN Disulfide, bis(3-nitrophenyl) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Disulfide, bis(m-nitrophenyl) (7CI, 8CI)

OTHER NAMES:

CN 3,3'-Dinitrodiphenyl disulfide

CN Bis(3-nitrophenyl) disulfide

CN Bis(m-nitrophenyl) disulfide

CN Hinagen

CN m,m'-Dinitrodiphenyl disulfide

CN Megasul

CN Nitrophenide

CN NP

CN NSC 677441

FS 3D CONCORD

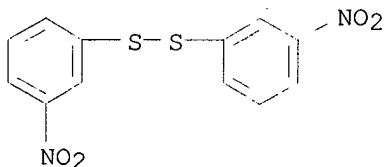
DR 8052-96-8

MF C12 H8 N2 O4 S2

LC STN Files: AGRICOLA, AQUIRE, BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS,
CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, HODOC*, MEDLINE,
MRCK*, MSDS-OHS, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Other Sources: EINECS**, NDSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

113 REFERENCES IN FILE CA (1962 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

113 REFERENCES IN FILE CAPLUS (1962 TO DATE)

4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:163341

REFERENCE 2: 136:340254

REFERENCE 3: 136:309714

REFERENCE 4: 136:115311

REFERENCE 5: 135:298211

REFERENCE 6: 133:327877

REFERENCE 7: 133:217305

REFERENCE 8: 133:163930

REFERENCE 9: 132:87659

REFERENCE 10: 132:30812

L80 ANSWER 40 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 502-55-6 REGISTRY

CN Thioperoxydicarbonic acid ([(HO)C(S)]₂S₂), diethyl ester (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Formic acid, dithiobis[thio-, O,O-diethyl ester (6CI, 8CI)

OTHER NAMES:

CN 3,8-Dioxa-5,6-dithiadecane-4,7-dithione

CN Antigal

CN Auligen

CN Aulin

CN Aulinogen

CN Bexide

CN Bisethylxanthogen

CN Bisethylxanthogen disulfide

CN Diethyl dixanthogen

CN Diethylxanthogen disulfide

CN Dithiobis(thioformic acid) O,O-diethyl ester

CN Dixan

CN Dixanthogen

CN EXD

CN Galasan

CN Herbisan

CN Herbisan 5

CN K Preparation

CN Lenisarin

CN NSC 402561

CN O,O-Diethyl dithiobis[thioformate]

CN Scabacidol

CN Sulfasan

CN Thioperoxydicarbonic acid diethyl ester

CN Xantoscabin

FS 3D CONCORD

MF C6 H10 O2 S4

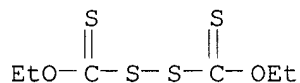
CI COM

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PHARMASEARCH, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, USAN, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**, NDSL**, TSCA**, WHO

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

347 REFERENCES IN FILE CA (1962 TO DATE)

5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
348 REFERENCES IN FILE CAPLUS (1962 TO DATE)
34 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:327637

REFERENCE 2: 137:301238

REFERENCE 3: 137:297680

REFERENCE 4: 137:216832

REFERENCE 5: 137:160579

REFERENCE 6: 137:157420

REFERENCE 7: 137:148701

REFERENCE 8: 136:263614

REFERENCE 9: 136:108845

REFERENCE 10: 134:202288

L80 ANSWER 41 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 137-26-8 REGISTRY

CN Thioperoxydicarbonic diamide ([H2N)C(S)]2S2), tetramethyl- (9CI) (CA
INDEX NAME)

OTHER CA INDEX NAMES:

CN Disulfide, bis(dimethylthiocarbamoyl) (8CI)

OTHER NAMES:

CN AApirol

CN Aatiram

CN Accel TMT

CN Accelerant T

CN Accelerator T

CN Accelerator Thiuram

CN Aceto TETD

CN Anles

CN Arasan

CN Arasan 42S

CN Arasan 50 red

CN Arasan 70

CN Arasan 70-S Red

CN Arasan 75

CN Arasan M

CN Arasan-SF

CN Atiram

CN Basultra

CN Betoxin

CN Bis(dimethylthiocarbamoyl) disulfide

CN Bis(dimethylthiocarbamyl) disulfide

CN Cunitex

CN Delsan

CN Ekagom TB

CN Emol

CN ENT 987

CN Falitiram

CN Ferna-Col

CN Fernasan

CN Fernasan A

CN Fernide

CN Formalsol

CN Hermal
 CN Hermat TMT
 CN Heryl
 CN Hexathir
 CN Kregasan
 CN Mercuram
 CN Methyl Thiram
 CN Methyl Tuads
 CN Metiur
 CN Metiurac
 CN N,N,N',N'-Tetramethylthiuram disulfide
 CN Nobecutan
 CN Nocceler TT
 CN Nomersan
 CN Normersan
 CN NSC 1771
 CN Orac TMTD

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY

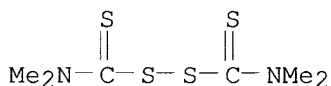
FS 3D CONCORD
 DR 12680-07-8, 12680-62-5, 56645-31-9, 66173-72-6, 93196-73-7, 39456-80-9
 MF C6 H12 N2 S4
 CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS,
 BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB,
 CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB,
 DDFU, DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT,
 IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PHARMASEARCH, PIRA,
 PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, ULIDAT, USAN, USPAT2,
 USPATFULL, VETU

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**, WHO

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6295 REFERENCES IN FILE CA (1962 TO DATE)
 93 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 6300 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 51 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:174721
 REFERENCE 2: 138:172644
 REFERENCE 3: 138:171595
 REFERENCE 4: 138:154892
 REFERENCE 5: 138:154888
 REFERENCE 6: 138:154880
 REFERENCE 7: 138:154715
 REFERENCE 8: 138:141877

REFERENCE 9: 138:141876

REFERENCE 10: 138:138625

L80 ANSWER 42 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN **128-53-0** REGISTRY

CN 1H-Pyrrole-2,5-dione, 1-ethyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Maleimide, N-ethyl- (8CI)

OTHER NAMES:

CN Ethylmaleimide

CN Maleic acid N-ethylimide

CN N-Ethylmaleimide

CN NEM

FS 3D CONCORD

MF C6 H7 N O2

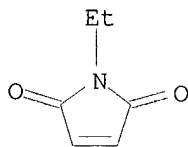
CI COM

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2983 REFERENCES IN FILE CA (1962 TO DATE)

35 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

2984 REFERENCES IN FILE CAPLUS (1962 TO DATE)

88 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:166561

REFERENCE 2: 138:163046

REFERENCE 3: 138:160900

REFERENCE 4: 138:153398

REFERENCE 5: 138:141336

REFERENCE 6: 138:119220

REFERENCE 7: 138:101071

REFERENCE 8: 138:95574

REFERENCE 9: 138:90206

REFERENCE 10: 138:83107

L80 ANSWER 43 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 120-78-5 REGISTRY

CN Benzothiazole, 2,2'-dithiobis- (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN 2,2'-Benzothiazolyl disulfide

CN 2,2'-Benzothiazyl disulfide

CN 2,2'-Dibenzothiazole disulfide

CN 2,2'-Dibenzothiazolyl disulfide

CN 2,2'-Dithiobis[benzothiazole]

CN 2-Benzothiazolyl disulfide

CN 2-Benzothiazyl disulfide

CN 2-Mercaptobenzothiazole disulfide

CN Accel DM

CN Accel TM

CN Altax

CN Benzothiazole disulfide

CN Benzothiazolyl disulfide

CN Benzothiazyl disulfide

CN Bis(2-benzothiazole) 2,2'-disulfide

CN Bis(2-benzothiazolyl) 2,2'-disulfide

CN Bis(2-benzothiazyl) disulfide

CN Bis(2-benzothiazyl) disulfide

CN DBTD

CN Di-2-benzothiazolyl disulfide

CN Dibenzothiazolyl disulfide

CN Dibenzothiazyl disulfide

CN Dibenzthiazyl disulfide

CN DM

CN DM (accelerator)

CN Ekagom GS

CN MBTS

CN MBTS rubber accelerator

CN Merasulf MBTS

CN Nocceler DM

CN Nocceler DM-PO

CN NSC 677459

CN Perkacit MBTS

CN Pneumax DM

CN Royal MBTS

CN Sanceler DM

CN Soxinol DM

CN Thiofide

CN Thiofide MBTS

CN Tiazol 2MBS

CN Vulcafor MBTS

CN Vulkacit DM

CN Vulkacit DM/C

CN Vulkacit DM/MG

CN Vulkafil ZN 96TT11

CN Wobezit DM

FS 3D CONCORD

DR 109767-80-8, 137497-18-8

MF C14 H8 N2 S4

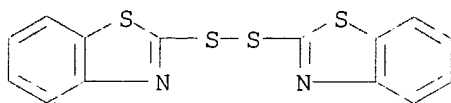
CI COM

LC STN Files: AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, ULIDAT, USPAT2, USPATFULL

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1767 REFERENCES IN FILE CA (1962 TO DATE)
 10 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 1770 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 45 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:171614
 REFERENCE 2: 138:171606
 REFERENCE 3: 138:171595
 REFERENCE 4: 138:170227
 REFERENCE 5: 138:138655
 REFERENCE 6: 138:123770
 REFERENCE 7: 138:108106
 REFERENCE 8: 138:108090
 REFERENCE 9: 138:108089
 REFERENCE 10: 138:108088

L80 ANSWER 44 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 105-65-7 REGISTRY

CN Thioperoxydicarbonic acid ([(HO)C(S)]2S2), bis(1-methylethyl) ester (9CI)
 (CA INDEX NAME)

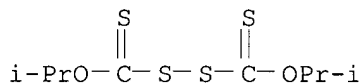
OTHER CA INDEX NAMES:

CN Formic acid, dithiobis[thio-, O,O-diisopropyl ester (6CI, 8CI)

OTHER NAMES:

CN Bis(2-propyl) dixanthogen
 CN Bis(isopropoxythiocarbonyl) disulfide
 CN Bis(isopropoxythiocarbonyl)disulfane
 CN Bis(isopropylxanthogen) disulfide
 CN Bis(O-isopropylxanthyl) disulfide
 CN Diisopropyl dixanthogen
 CN Diisopropyl tetrathioperoxydicarbonate
 CN Diisopropyl xanthogenate disulfide
 CN Diisopropylxanthogen disulfide
 CN Diproxid
 CN Diproxide
 CN Isopropyl xanthogen disulfide
 CN NSC 1339
 CN O,O-Diisopropyl dithiobis(thioformate)
 FS 3D CONCORD
 MF C8 H14 O2 S4
 CI COM
 LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST,
 CSCHEM, HODOC*, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, RTECS*, SPECINFO,
 TOXCENTER, USPATFULL

(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

203 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
204 REFERENCES IN FILE CAPLUS (1962 TO DATE)
31 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:122922
REFERENCE 2: 138:5436
REFERENCE 3: 137:186850
REFERENCE 4: 136:355310
REFERENCE 5: 134:202288
REFERENCE 6: 133:268128
REFERENCE 7: 133:239012
REFERENCE 8: 133:237514
REFERENCE 9: 132:30812
REFERENCE 10: 131:116407

L80 ANSWER 45 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 100-32-3 REGISTRY

CN Disulfide, bis(4-nitrophenyl) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Disulfide, bis(p-nitrophenyl) (7CI, 8CI)

OTHER NAMES:

CN 4,4'-Dinitrodiphenyl disulfide

CN Bis(4-nitrophenyl) disulfide

CN Bis(p-nitrophenyl) disulfide

CN Di(p-nitrophenyl) disulfide

CN Di-4-nitrophenyl disulfide

CN NSC 677446

CN p,p'-Dinitrodiphenyl disulfide

CN p-Nitrophenyl disulfide

FS 3D CONCORD

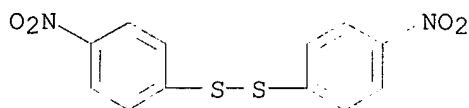
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LC STN Files: BEILSTEIN*, BIOSIS, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT,
CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, HODOC*, IFICDB, IFIPAT,
IFIUDB, MEDLINE, RTECS*, TOXCENTER, USPAT2, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**, NDSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

312 REFERENCES IN FILE CA (1962 TO DATE)
 313 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 17 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:128478
 REFERENCE 2: 138:4420
 REFERENCE 3: 137:369981
 REFERENCE 4: 137:163341
 REFERENCE 5: 137:130431
 REFERENCE 6: 136:309714
 REFERENCE 7: 136:118106
 REFERENCE 8: 136:115311
 REFERENCE 9: 136:53632
 REFERENCE 10: 135:298211

L80 ANSWER 46 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN **97-77-8** REGISTRY

CN Thioperoxydicarbonic diamide ([(H2N)C(S)]2S2), tetraethyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Disulfide, bis(diethylthiocarbamoyl) (8CI)

OTHER NAMES:

CN Abstensil

CN Abstinil

CN Abstinyll

CN Accel TET

CN Accel TET-R

CN Alcophobin

CN Antabus

CN Antabuse

CN Antadix

CN Antaethyl

CN Antalcol

CN Antetan

CN Antetil

CN Anticol

CN Antietanol

CN Antietil

CN Antikol

CN Antivitium

CN Aversan

CN Aversan

CN Bis(diethylthiocarbamoyl) disulfide

CN Bis(N,N-diethylthiocarbamoyl) disulfide

CN Contralin
 CN Cronetal
 CN Dicupral
 CN Disulfiram
 CN Ekagom DTET
 CN Ekagom TEDS
 CN Ekagom TETDS
 CN Espenal
 CN Esperal
 CN Etabus
 CN Ethyl Thiram
 CN Ethyl Thiurad
 CN Ethyl Tuads
 CN Ethyl Tuex
 CN Exhoran
 CN Exhorran
 CN Hoca
 CN Krotenal
 CN N,N,N',N'-Tetraethylthiuram disulfide
 CN Nocceler TET
 CN Nocceler TET-G
 CN Noxal
 CN NSC 25953
 CN Refusal
 CN Sanceler TET
 CN Sanceler TET-G
 CN Soxinol TET

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for
DISPLAY

FS 3D CONCORD

DR 11078-22-1, 155-01-1

MF C10 H20 N2 S4

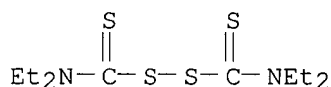
CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS,
 BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB,
 CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB,
 DDFU, DIOGENES, DRUGU, DRUGUPDATES, EMBASE, GMELIN*, HODOC*, HSDB*,
 IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC,
 PHARMASEARCH, PROMT, RTECS*, SPECINFO, TOXCENTER, USAN, USPAT2,
 USPATFULL

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**, WHO

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2462 REFERENCES IN FILE CA (1962 TO DATE)

43 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

2466 REFERENCES IN FILE CAPLUS (1962 TO DATE)

23 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:161029

REFERENCE 2: 138:154892

REFERENCE 3: 138:154880

REFERENCE 4: 138:153880
REFERENCE 5: 138:141877
REFERENCE 6: 138:141876
REFERENCE 7: 138:132288
REFERENCE 8: 138:123985
REFERENCE 9: 138:123984
REFERENCE 10: 138:123983

L80 ANSWER 47 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 94-37-1 REGISTRY

CN Piperidine, 1,1'-(dithiodicarbonothioyl)bis- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Disulfide, bis(piperidinethiocarbonyl) (6CI, 8CI)

OTHER NAMES:

CN 1-Piperidinethiocarbonyl disulfide

CN Bis(1-piperidylthiocarbonyl) disulfide

CN Bis(pentamethylene)thiuram disulfide

CN Bis(piperidinethiocarbonyl) disulfide

CN Dicyclopentamethylenethiuram disulfide

CN Dipentamethylenethiuram disulfide

CN Disulfide, bis(1-piperidinylthioxomethyl)

CN N,N'-Pentamethylenethiuram disulfide

CN NSC 527035

CN Robac PTD

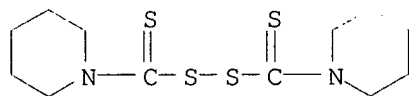
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MF C12 H20 N2 S4

LC STN Files: BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT,
CHEMCATS, CHEMLIST, CSCHEM, CSNB, GMELIN*, HODOC*, IFICDB, IFIPAT,
IFIUDB, MSDS-OHS, NIOSHTIC, RTECS*, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Other Sources: EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

135 REFERENCES IN FILE CA (1962 TO DATE)

4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

135 REFERENCES IN FILE CAPLUS (1962 TO DATE)

15 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:173922
REFERENCE 2: 137:144483
REFERENCE 3: 137:97915
REFERENCE 4: 137:47787

REFERENCE 5: 137:1669
REFERENCE 6: 136:351518
REFERENCE 7: 136:87061
REFERENCE 8: 136:73953
REFERENCE 9: 135:328241
REFERENCE 10: 135:231225

L80 ANSWER 48 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 69-78-3 REGISTRY

CN Benzoic acid, 3,3'-dithiobis[6-nitro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN 2,2'-Dinitro-5,5'-dithiodibenzoic acid

CN 3,3'-Dithiobis(6-nitrobenzoic acid)

CN 5,5'-Dithiobis[2-nitrobenzoic acid]

CN Ba 2767

CN DTNB

CN Named reagents and solutions, Ellman's

FS 3D CONCORD

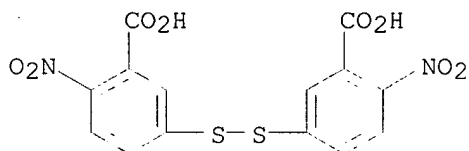
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CI COM

LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, CSNB, DDFU, DRUGU, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL (*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1214 REFERENCES IN FILE CA (1962 TO DATE)

40 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1216 REFERENCES IN FILE CAPLUS (1962 TO DATE)

18 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:157786
REFERENCE 2: 138:121654
REFERENCE 3: 138:119150
REFERENCE 4: 138:117667
REFERENCE 5: 138:112583
REFERENCE 6: 138:68271

REFERENCE 7: 138:51340

REFERENCE 8: 138:50926

REFERENCE 9: 138:35734

REFERENCE 10: 138:21494

L80 ANSWER 49 OF 49 REGISTRY COPYRIGHT 2003 ACS

RN 67-16-3 REGISTRY

CN Formamide, N,N'-[dithiobis[2-(2-hydroxyethyl)-1-methyl-2,1-ethenediyl]]bis[N-[(4-amino-2-methyl-5-pyrimidinyl)methyl]- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Formamide, N,N'-[dithiobis[2-(2-hydroxyethyl)-1-methylvinylene]]bis[N-[(4-amino-2-methyl-5-pyrimidinyl)methyl]- (7CI, 8CI)

OTHER NAMES:

CN Aktivin

CN Algoneurina

CN Alitia S

CN Aneurin disulfide

CN Aneurine disulfide

CN Apren S

CN Daiomin

CN Daisazin

CN Feidmin 5

CN N,N'-[Dithiobis[2-(2-hydroxyethyl)-1-methylvinylene]]bis[N-[(4-amino-2-methyl-5-pyrimidinyl)methyl]formamide

CN Neolamin

CN SSB1

CN TDS

CN TDS (neurotrope)

CN Thiamidin F

CN Thiamin disulfide

CN Thiamine disulfide

CN Vitamin B1 disulfide

MF C24 H34 N8 O4 S2

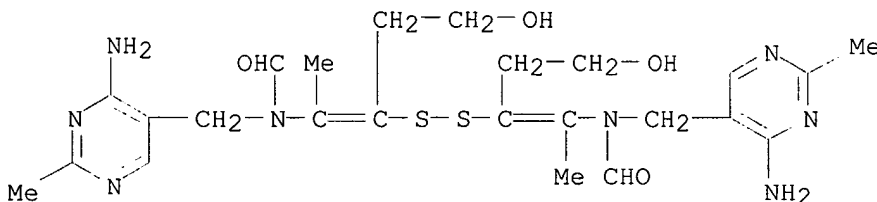
CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, DDFU, DRUGU, EMBASE, IPA, MEDLINE, MRCK*, PHAR, PROMT, RTECS*, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**, NDSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

280 REFERENCES IN FILE CA (1962 TO DATE)

7 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

280 REFERENCES IN FILE CAPLUS (1962 TO DATE)

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:149113
REFERENCE 2: 136:279640
REFERENCE 3: 134:366891
REFERENCE 4: 133:263015
REFERENCE 5: 132:347366
REFERENCE 6: 132:30812
REFERENCE 7: 131:308852
REFERENCE 8: 131:291297
REFERENCE 9: 131:257023
REFERENCE 10: 131:210860

=> s 179 not 180
L81 2 L79 NOT L80

=> d ide can tot

L81 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2003 ACS
RN 13982-39-3 REGISTRY
CN Zinc, isotope of mass 65 (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 65Zn
CN Zinc-65
CN Zn 65
MF Zn
CI COM
LC STN Files: AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD,
CAPLUS, CIN, CSNB, EMBASE, IFICDB, IFIPAT, IFIUDB, NIOSHTIC, TOXCENTER,
USPATFULL

65Zn

2280 REFERENCES IN FILE CA (1962 TO DATE)
19 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2280 REFERENCES IN FILE CAPLUS (1962 TO DATE)
42 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:160097
REFERENCE 2: 138:94329
REFERENCE 3: 138:44143
REFERENCE 4: 138:29798
REFERENCE 5: 138:21378
REFERENCE 6: 138:17630
REFERENCE 7: 138:17544

REFERENCE 8: 137:369372

REFERENCE 9: 137:369212

REFERENCE 10: 137:365827

L81 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2003 ACS

RN 7440-66-6 REGISTRY

CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN AN 325

CN Asarco L 15

CN Blue powder

CN Ecka 4

CN F 1000

CN F 1000 (metal)

CN F 1500T

CN F 2000

CN F 2000 (metal)

CN LS 2

CN LS 2 (element)

CN LS 4

CN LS 5

CN LS 5 (metal)

CN MCS

CN MCS (metal)

CN NC-Zinc

CN Rheinzink

CN UF

CN UF (metal)

CN VM 4P16

CN Zinc Dust 3

DR 12793-53-2, 195161-85-4, 199281-21-5, 298688-49-0

MF Zn

CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PHARMASEARCH, PIRA, PROMT, RTECS*, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

Zn

225889 REFERENCES IN FILE CA (1962 TO DATE)

11565 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

225965 REFERENCES IN FILE CAPLUS (1962 TO DATE)

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:179845

REFERENCE 2: 138:179828

REFERENCE 3: 138:179771

REFERENCE 4: 138:179717

REFERENCE 5: 138:179656
REFERENCE 6: 138:179557
REFERENCE 7: 138:179289
REFERENCE 8: 138:179288
REFERENCE 9: 138:179280
REFERENCE 10: 138:179167

=> fil hcaplus

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FILE COVERS 1907 - 15 Mar 2003 VOL 138 ISS 12
FILE LAST UPDATED: 14 Mar 2003 (20030314/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L78 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 2003 ACS
AN 1999:794242 HCAPLUS
DN 132:30812
TI Method for identifying and using compounds that **inactivate HIV-1** and other retroviruses by attacking highly conserved **zinc fingers** in the viral **nucleocapsid** protein
IN **Henderson, Louis E.; Arthur, Larry O.; Rice, William G.; Rein, Alan R.**
PA United States of America as Represented by the Department of Health and Human Services, USA
SO U.S., 30 pp., Cont.-in-part of U.S. Ser. No. 312,331, abandoned.
CODEN: USXXAM
DT Patent
LA English
IC ICM C12Q001-70
NCL 435005000
CC 1-5 (Pharmacology)
FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|------------------------------------------------------------------------|------|----------|-----------------|--------------|
| PI | US 6001555 | A | 19991214 | US 1995-379420 | 19950127 <-- |
| PRAI | US 1994-312331 | B2 | 19940923 | <-- | |
| OS | MARPAT 132:30812 | | | | |
| AB | The present invention provides several classes of compds, which can be | | | | |

used to **inactivate** retroviruses, e.g. HIV-1, by attacking the **CCHC zinc fingers** of the viral **nucleocapsid** protein and ejecting the **zinc** therefrom. In addn., kits for identifying compds. that can react with **CCHC zinc fingers** of the **nucleocapsid** proteins of a large no. of different retroviruses have also been developed. The kits of the present invention describe a set of specific tests and reagents that can be used to screen and identify compds. based on their ability to react with and disrupt retroviral **zinc fingers** in the viral NC proteins and, in turn, **inactivate** the retrovirus of interest.

- ST retrovirus **nucleocapsid** protein **zinc finger**
antiviral; HIV1 **nucleocapsid** protein **zinc finger** antiviral; screening antiviral retrovirus **nucleocapsid** protein **zinc finger**
- IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(NC(p7) (**nucleocapsid**, p7); identification and use of compds. **inactivating** HIV-1 or other retrovirus by attacking highly conserved **zinc finger** in viral **nucleocapsid** protein. and use with other agents)
- IT Nucleotides, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(analog; identification and use of compds. **inactivating** HIV-1 or other retrovirus by attacking highly conserved **zinc finger** in viral **nucleocapsid** protein. and use with other agents)
- IT Ketones, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(halo; identification and use of compds. **inactivating** HIV-1 or other retrovirus by attacking highly conserved **zinc finger** in viral **nucleocapsid** protein)
- IT Antiviral agents
Capillary electrophoresis
Fluorometry
HPLC
Human immunodeficiency virus 1
Lentivirus
NMR spectroscopy
Retroviridae
(identification and use of compds. **inactivating** HIV -1 or other retrovirus by attacking highly conserved **zinc finger** in viral **nucleocapsid** protein)
- IT Disulfides
Hydrazides
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(identification and use of compds. **inactivating** HIV -1 or other retrovirus by attacking highly conserved **zinc finger** in viral **nucleocapsid** protein)
- IT Drug screening
Redox reaction
(identification and use of compds. **inactivating** HIV -1 or other retrovirus by attacking highly conserved **zinc finger** in viral **nucleocapsid** protein. and use with other agents)
- IT Immunoassay
(immunoblotting; identification and use of compds. **inactivating**

- HIV-1 or other retrovirus by attacking highly conserved
zinc finger in viral nucleocapsid protein)
- IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(nucleocapsid; identification and use of compds.
inactivating HIV-1 or other retrovirus by attacking
highly conserved zinc finger in viral
nucleocapsid protein)
- IT Virus
(oncovirus; identification and use of compds.
inactivating HIV-1 or other retrovirus by attacking
highly conserved zinc finger in viral
nucleocapsid protein)
- IT Protein motifs
(zinc finger; identification and use of compds.
inactivating HIV-1 or other retrovirus by attacking
highly conserved zinc finger in viral
nucleocapsid protein)
- IT 7440-50-8, Copper, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cupric ion; identification and use of compds. inactivating
HIV-1 or other retrovirus by attacking highly conserved
zinc finger in viral nucleocapsid protein)
- IT 7439-89-6, Iron, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ferric ion; identification and use of compds. inactivating
HIV-1 or other retrovirus by attacking highly conserved
zinc finger in viral nucleocapsid protein)
- IT 69-78-3 94-37-1, Dicyclopentamethylenethiuram disulfide
97-77-8, Tetraethylthiuram disulfide 100-32-3
105-65-7 120-78-5 137-26-8, Tetramethylthiuram
disulfide 502-55-6, O,O-Diethyl dithiobis(thioformate)
537-91-7 541-59-3D, Maleimide, derivs. 589-32-2
644-32-6, Benzoyl disulfide 1119-62-6 1141-88-4
1634-02-2, Tetrabutylthiuram disulfide 2127-03-9,
Aldrithiol-2 2461-75-8 2645-22-9,
Aldrithiol-4 2889-13-6 3696-28-4 3808-87-5
4136-91-8, Tetraisopropylthiuram disulfide 4490-97-5
5397-29-5 7038-49-5 7439-89-6D, Iron,
complexes, biological studies 7440-50-8D, Copper, complexes,
biological studies 10102-43-9, Nitric oxide, biological studies
10102-43-9D, Nitric oxide, derivs. 14193-38-5,
trans-1,2-Dithiane-4,5-diol 14370-67-3, p-Tolyl disulfoxide
14756-51-5 14807-75-1, Formamidine disulfide
dihydrochloride 15658-35-2 16766-09-9
20201-05-2 24696-61-5, 2,4-Dinitrophenyl-p-tolyl
disulfide 29124-55-8 29581-98-4 33174-74-2
38262-57-6 61747-35-1 66546-28-9
72687-29-7 178487-70-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(identification and use of compds. inactivating HIV
-1 or other retrovirus by attacking highly conserved zinc
finger in viral nucleocapsid protein)
- IT 7440-66-6, Zinc, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

- (identification and use of compds. **inactivating HIV**
-1 or other retrovirus by attacking highly conserved **zinc**
finger in viral **nucleocapsid** protein)
- IT 252295-83-3
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(identification and use of compds. **inactivating HIV**
-1 or other retrovirus by attacking highly conserved **zinc**
finger in viral **nucleocapsid** protein)
- IT 144189-66-2, 3-Nitrosobenzamide
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(identification and use of compds. **inactivating HIV**
-1 or other retrovirus by attacking highly conserved **zinc**
finger in viral **nucleocapsid** protein. and use with
other agents)
- IT 67-16-3, Thiamine disulfide 128-53-0, N-Ethylmaleimide
30516-87-1 35964-48-8
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(identification and use of compds. **inactivating HIV**
-1 or other retrovirus by attacking highly conserved **zinc**
finger in viral **nucleocapsid** protein. and use with
other agents)
- IT 3544-24-9 7447-39-4, Cupric chloride, processes 156730-41-5
252251-19-7
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(identification and use of compds. **inactivating HIV**
-1 or other retrovirus by attacking highly conserved **zinc**
finger in viral **nucleocapsid** protein. and use with
other agents)
- IT 13982-39-3, Zinc-65, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(release of radioactive; identification and use of compds.
inactivating HIV-1 or other retrovirus by attacking
highly conserved **zinc finger** in viral
nucleocapsid protein)

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

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(28) Yu, X; Chemical Research in Toxicology 1995, V8, P586 HCAPLUS
IT 7440-50-8, Copper, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cupric ion; identification and use of compds. **inactivating** HIV-1 or other retrovirus by attacking highly conserved **zinc finger** in viral **nucleocapsid** protein)
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

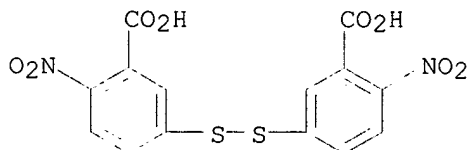
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IT 7439-89-6, Iron, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ferric ion; identification and use of compds. **inactivating** HIV-1 or other retrovirus by attacking highly conserved **zinc finger** in viral **nucleocapsid** protein)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

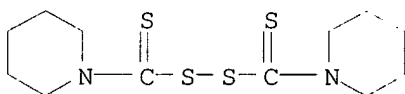
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IT 69-78-3 94-37-1, Dicyclopentamethylenethiuram disulfide
97-77-8, Tetraethylthiuram disulfide 100-32-3
105-65-7 120-78-5 137-26-8, Tetramethylthiuram disulfide 502-55-6, O,O-Diethyl dithiobis(thioformate) 537-91-7 541-59-3D, Maleimide, derivs. 589-32-2
644-32-6, Benzoyl disulfide 1119-62-6 1141-88-4
1634-02-2, Tetrabutylthiuram disulfide 2127-03-9, Aldrithiol-2 2461-75-8 2645-22-9, Aldrithiol-4 2889-13-6 3696-28-4 3808-87-5
4136-91-8, Tetraisopropylthiuram disulfide 4490-97-5
5397-29-5 7038-49-5 7439-89-6D, Iron, complexes, biological studies 7440-50-8D, Copper, complexes, biological studies 10102-43-9, Nitric oxide, biological studies 10102-43-9D, Nitric oxide, derivs. 14193-38-5, trans-1,2-Dithiane-4,5-diol 14370-67-3, p-Tolyl disulfoxide 14756-51-5 14807-75-1, Formamidine disulfide dihydrochloride 15658-35-2 16766-09-9
20201-05-2 24696-61-5, 2,4-Dinitrophenyl-p-tolyl disulfide 29124-55-8 29581-98-4 33174-74-2
38262-57-6 61747-35-1 66546-28-9
72687-29-7 178487-70-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(identification and use of compds. **inactivating** HIV-1 or other retrovirus by attacking highly conserved **zinc finger** in viral **nucleocapsid** protein)

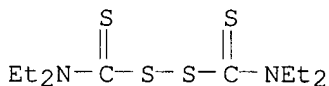
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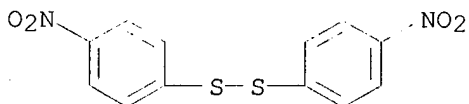
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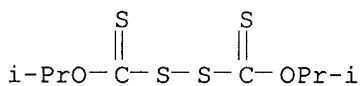
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 CN Thioperoxydicarbonic diamide ([(H2N)C(S)]2S2), tetraethyl- (9CI) (CA INDEX NAME)



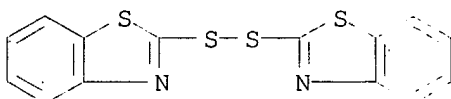
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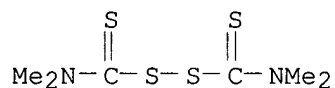
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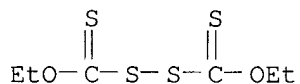
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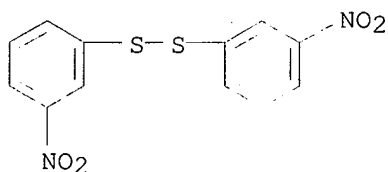
RN 137-26-8 HCAPLUS
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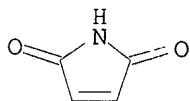
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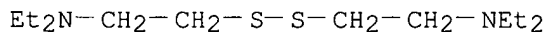
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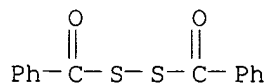
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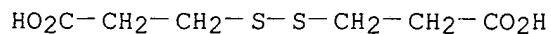
RN 589-32-2 HCAPLUS
 CN Ethanamine, 2,2'-dithiobis[N,N-diethyl- (9CI) (CA INDEX NAME)



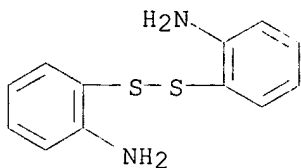
RN 644-32-6 HCAPLUS
 CN Disulfide, dibenzoyl (9CI) (CA INDEX NAME)



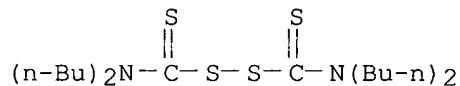
RN 1119-62-6 HCAPLUS
 CN Propanoic acid, 3,3'-dithiobis- (9CI) (CA INDEX NAME)



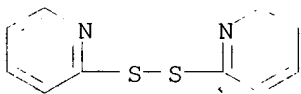
RN 1141-88-4 HCAPLUS
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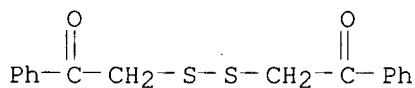
RN 1634-02-2 HCAPLUS
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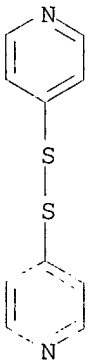
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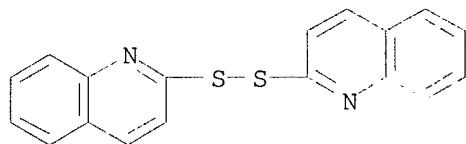
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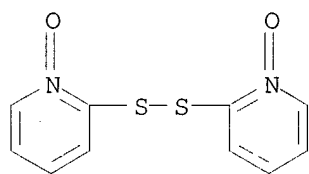
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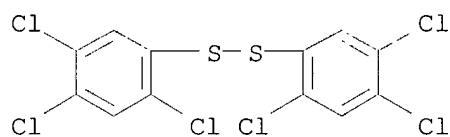
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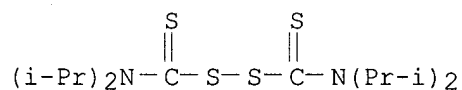
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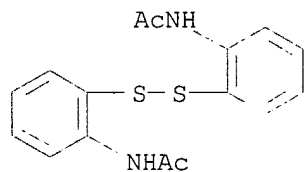
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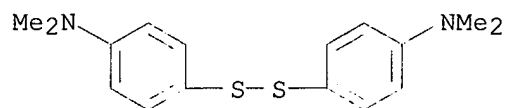
RN 4136-91-8 HCAPLUS
 CN Thioperoxydicarbonic diamide ((H₂N)C(S)]₂S₂), tetrakis(1-methylethyl)- (9CI) (CA INDEX NAME)



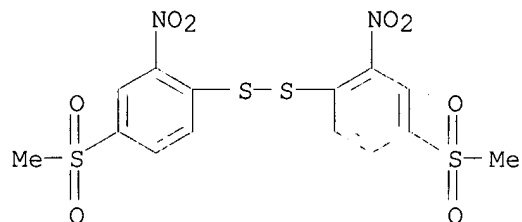
RN 4490-97-5 HCAPLUS
 CN Acetamide, N,N'-(dithiodi-2,1-phenylene)bis- (9CI) (CA INDEX NAME)



RN 5397-29-5 HCAPLUS
 CN Benzenamine, 4,4'-dithiobis[N,N-dimethyl- (9CI) (CA INDEX NAME)



RN 7038-49-5 HCAPLUS
 CN Disulfide, bis[4-(methylsulfonyl)-2-nitrophenyl] (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7439-89-6 HCAPLUS
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7440-50-8 HCAPLUS
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 10102-43-9 HCAPLUS
 CN Nitrogen oxide (NO) (8CI, 9CI) (CA INDEX NAME)

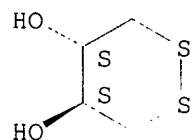
N=O

RN 10102-43-9 HCAPLUS
 CN Nitrogen oxide (NO) (8CI, 9CI) (CA INDEX NAME)

N=O

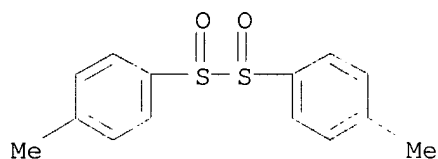
RN 14193-38-5 HCAPLUS
 CN 1,2-Dithiane-4,5-diol, (4R,5R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



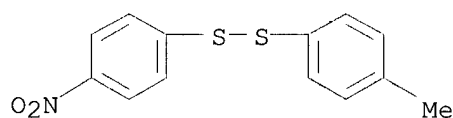
RN 14370-67-3 HCAPLUS

CN Disulfoxide, bis(4-methylphenyl) (9CI) (CA INDEX NAME)



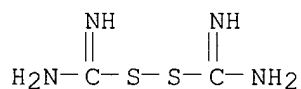
RN 14756-51-5 HCAPLUS

CN Disulfide, 4-methylphenyl 4-nitrophenyl (9CI) (CA INDEX NAME)



RN 14807-75-1 HCAPLUS

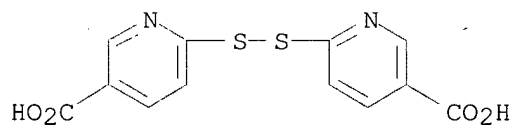
CN Thioperoxydicarbonimidic diamide ([(H₂N)C(NH)]₂S₂), dihydrochloride (9CI)
(CA INDEX NAME)



● 2 HCl

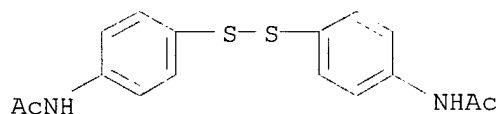
RN 15658-35-2 HCAPLUS

CN 3-Pyridinecarboxylic acid, 6,6'-dithiobis- (9CI) (CA INDEX NAME)



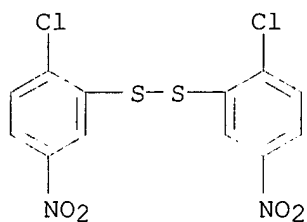
RN 16766-09-9 HCAPLUS

CN Acetamide, N,N'-(dithiodi-4,1-phenylene)bis- (9CI) (CA INDEX NAME)

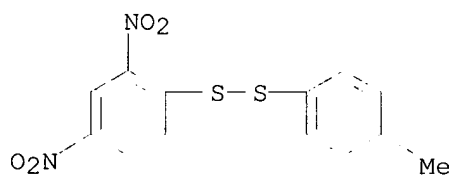


RN 20201-05-2 HCAPLUS

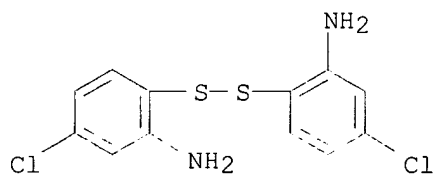
CN Disulfide, bis(2-chloro-5-nitrophenyl) (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 24696-61-5 HCAPLUS
 CN Disulfide, 2,4-dinitrophenyl 4-methylphenyl (9CI) (CA INDEX NAME)

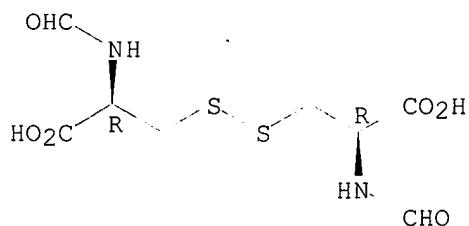


RN 29124-55-8 HCAPLUS
 CN Benzenamine, 2,2'-dithiobis[5-chloro- (9CI) (CA INDEX NAME)

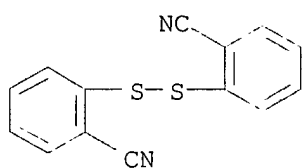


RN 29581-98-4 HCAPLUS
 CN L-Cystine, N,N'-diformyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

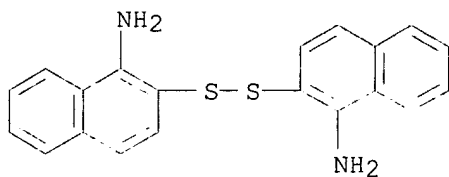


RN 33174-74-2 HCAPLUS
 CN Benzonitrile, 2,2'-dithiobis- (9CI) (CA INDEX NAME)



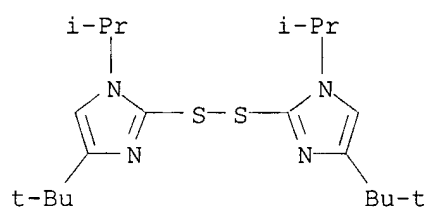
RN 38262-57-6 HCAPLUS

CN 1-Naphthalenamine, 2,2'-dithiobis- (9CI) (CA INDEX NAME)



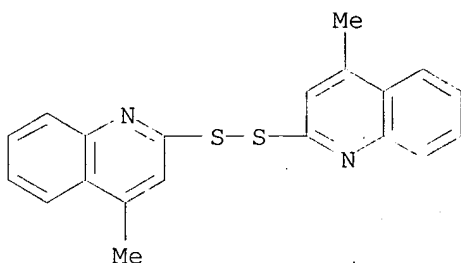
RN 61747-35-1 HCAPLUS

CN 1H-Imidazole, 2,2'-dithiobis[4-(1,1-dimethylethyl)-1-(1-methylethyl)- (9CI) (CA INDEX NAME)



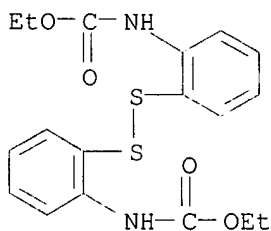
RN 66546-28-9 HCAPLUS

CN Quinoline, 2,2'-dithiobis[4-methyl- (9CI) (CA INDEX NAME)



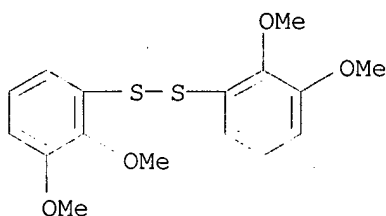
RN 72687-29-7 HCAPLUS

CN Carbamic acid, (dithiodi-2,1-phenylene)bis-, diethyl ester (9CI) (CA INDEX NAME)



RN 178487-70-2 HCAPLUS

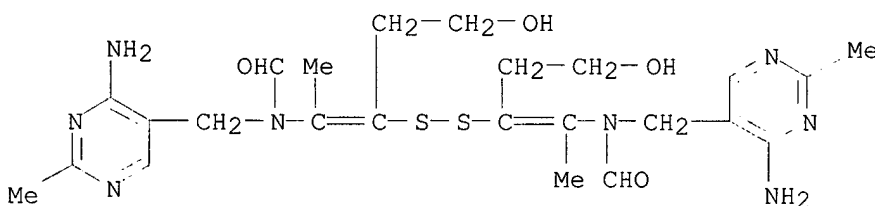
CN Disulfide, bis(2,3-dimethoxyphenyl) (9CI) (CA INDEX NAME)



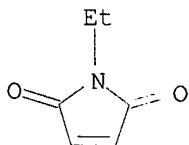
IT 7440-66-6, Zinc, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (identification and use of compds. **inactivating HIV**
 -1 or other retrovirus by attacking highly conserved **zinc**
finger in viral **nucleocapsid** protein)
 RN 7440-66-6 HCAPLUS
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

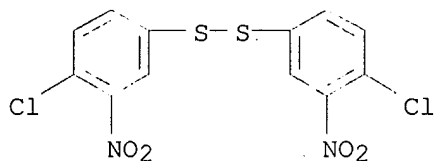
IT 67-16-3, Thiamine disulfide 128-53-0, N-Ethylmaleimide
 35964-48-8
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (identification and use of compds. **inactivating HIV**
 -1 or other retrovirus by attacking highly conserved **zinc**
finger in viral **nucleocapsid** protein. and use with
 other agents)
 RN 67-16-3 HCAPLUS
 CN Formamide, N,N'-[dithiobis[2-(2-hydroxyethyl)-1-methyl-2,1-ethenediyl]]bis[N-[(4-amino-2-methyl-5-pyrimidinyl)methyl]- (9CI) (CA INDEX NAME)



RN 128-53-0 HCAPLUS
 CN 1H-Pyrrole-2,5-dione, 1-ethyl- (9CI) (CA INDEX NAME)



RN 35964-48-8 HCAPLUS
 CN Disulfide, bis(4-chloro-3-nitrophenyl) (9CI) (CA INDEX NAME)

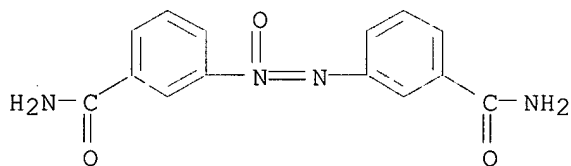


IT 156730-41-5

RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (identification and use of compds. **inactivating HIV**
 -1 or other retrovirus by attacking highly conserved **zinc**
finger in viral **nucleocapsid** protein. and use with
 other agents)

RN 156730-41-5 HCAPLUS

CN Benzamide, 3,3'-azoxybis- (9CI) (CA INDEX NAME)



IT 13982-39-3, Zinc-65, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (release of radioactive; identification and use of compds.
inactivating HIV-1 or other retrovirus by attacking
 highly conserved **zinc finger** in viral
nucleocapsid protein)

RN 13982-39-3 HCAPLUS

CN Zinc, isotope of mass 65 (8CI, 9CI) (CA INDEX NAME)

⁶⁵Zn

L78 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2003 ACS

AN 1996:422386 HCAPLUS

DN 125:76341

TI A method for identifying and using compounds that **inactivate**
HIV-1 and other retroviruses by attacking highly conserved
zinc fingers in the viral **nucleocapsid** protein

IN **Henderson, Louis E.; Arthur, Larry O.; Rice,**
William G.

PA United States Dept. of Health and Human Services, USA

SO PCT Int. Appl., 58 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C12Q001-18

ICS A61K031-04; A61K031-095; A61K031-12; A61K031-15; A61K031-295;
 A61K031-30; A61K031-40

CC 1-5 (Pharmacology)

FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|--------------------------------------------------------------------|------|----------|-----------------|--------------|
| PI | WO 9609406 | A1 | 19960328 | WO 1995-US11915 | 19950919 <-- |
| | W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, | | | | |

GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD,
 MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
 TJ, TM
 RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,
 LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE,
 SN, TD, TG

AU 9535927 A1 19960409 AU 1995-35927 19950919 <--

EP 782632 A1 19970709 EP 1995-933161 19950919 <--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE

PRAI US 1994-312331 A 19940923 <--

WO 1995-US11915 W 19950919 <--

OS MARPAT 125:76341

AB Several classes of compds. (disulfides, maleimides, .alpha.-halogenated ketones, hydrazides, nitric oxide and NO-contg. derivs., cupric ions and complexes thereof, ferric ions and complexes thereof) are provided which can be used to **inactivate** retroviruses, e.g. **HIV-1**, by attacking the **CCHC zinc fingers** of the viral **nucleocapsid** protein and ejecting the **zinc** therefrom. In addn., kits for identifying compds. that can react with **CCHC zinc fingers** of the **nucleocapsid** proteins of a large no. of different retroviruses have also been developed. The kits of the present invention describe a set of specific tests and reagents that can be used to screen and identify compds. based on their ability to react with and disrupt retroviral **zinc fingers** in the viral NC proteins and, in turn, **inactivate** the retrovirus of interest. The effect of e.g. disulfides on **HIV-1** is included.

ST retrovirus **nucleocapsid** protein **zinc finger**

inactivation; HIV1 nucleocapsid protein

zinc finger inactivation

IT Fluorometry

Nuclear magnetic resonance

(detection of **zinc** dissocn. from **zinc**

finger in relation to identification and use of compds.

inactivating HIV-1 and other retroviruses by

attacking highly conserved **zinc fingers** in viral

nucleocapsid protein)

IT Electrophoresis and Ionophoresis

(gel mobility shift; detection of **zinc** dissocn. from

zinc finger in relation to identification and use of

compds. **inactivating HIV-1** and other retroviruses

by attacking highly conserved **zinc fingers** in viral

nucleocapsid protein)

IT Electron acceptors

Virucides and Virustats

(identification and use of compds. **inactivating HIV**

-1 and other retroviruses by attacking highly conserved **zinc**

fingers in viral **nucleocapsid** protein)

IT Disulfides

Hydrazides

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(identification and use of compds. **inactivating HIV**

-1 and other retroviruses by attacking highly conserved **zinc**

fingers in viral **nucleocapsid** protein)

IT Proteins, specific or class

RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)

(**nucleocapsid** p11; identification and use of compds.

inactivating HIV-1 and other retroviruses by

attacking highly conserved **zinc fingers** in viral

nucleocapsid protein)

IT Proteins, specific or class

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)

(NC(p7) (**nucleocapsid**, p7), identification and use of compds.

- inactivating HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
- IT Nucleotides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(analogs, identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein, and use with addnl. nucleotide analog)
- IT Electrophoresis and Ionophoresis
(capillary, detection of **zinc** dissocn. from **zinc finger** in relation to identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
- IT Virus, animal
(equine infectious anemia, identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
- IT Ketones, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(halo, identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
- IT Chromatography, column and liquid
(high-performance, detection of **zinc** dissocn. from **zinc finger** in relation to identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
- IT Virus, animal
(human immunodeficiency 1, identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
- IT Immunoassay
(immunoblotting, detection of **zinc** dissocn. from **zinc finger** in relation to identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
- IT Virus, animal
(lenti-, identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
- IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**nucleocapsid**, identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
- IT Virus, animal
(oncogenic, identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
- IT Virus, animal
(retro-, identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)

- IT Conformation and Conformers
(**zinc-finger** motif, identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
- IT 7440-50-8, Copper, biological studies 7440-50-8D, Copper, complexes
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cupric ion; identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
- IT 13982-39-3, Zinc-65, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(detection of **zinc** dissocn. from **zinc finger** in relation to identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
- IT 7439-89-6, Iron, biological studies 7439-89-6D, Iron, complexes
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ferric ion; identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
- IT 67-16-3, Thiamine disulfide 69-78-3 94-37-1, Dicyclopentamethylenethiuram disulfide 97-77-8, Tetraethylthiuram disulfide 100-32-3 108-25-8 120-78-5 128-53-0, N-Ethylmaleimide 137-26-8, Tetramethylthiuram disulfide 502-55-6, O,O-Diethyldithiobis(thioformate) 537-91-7, Bis 3-Nitrophenyl disulfide 589-32-2 644-32-6, Benzoyl disulfide 1119-62-6, 3,3-Dithiobispropionic acid 1141-88-4 1634-02-2, Tetrabutylthiuram disulfide 2127-03-9, Aldrithiol-2 2461-75-8 2645-22-9, Aldrithiol-4 2889-13-6 3696-28-4 3808-87-5, Bis 2,4,5-Trichlorophenyl disulfide 4136-91-8, Tetraisopropylthiuram disulfide 4490-97-5 5397-29-5 5428-99-9 7447-39-4, Cupric chloride, biological studies 14193-38-5, trans-1,2-Dithiane-4,5-diol 14370-67-3, p-Tolyl disulfoxide 14807-75-1, Formamidine disulfide dihydrochloride 15658-35-2 16766-09-9 20201-05-2, Bis 2-Chloro-5-nitrophenyl disulfide 24696-61-5, 2,4-Dinitrophenyl p-tolyl disulfide 29124-55-8 29581-98-4 33174-74-2, 2,2-Dithiobis(benzonitrile) 35964-48-8 38262-57-6 40897-56-1 61747-35-1 66546-28-9 72687-29-7 144189-66-2, 3-Nitrosobenzamide 178487-70-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
- IT 7440-66-6, Zinc, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(identification and use of compds. **inactivating** HIV-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
- IT 541-59-3D, Maleimide, derivs. 10102-43-9, Nitric oxide, biological studies 10102-43-9D, Nitric oxide, derivs.
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(identification and use of compds. **inactivating** HIV

-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)
IT 30516-87-1, AZT
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(identification and use of compds. **inactivating HIV**
-1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein, and use with
addnl. nucleotide analog)
IT 7440-50-8, Copper, biological studies 7440-50-8D,
Copper, complexes
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cupric ion; identification and use of compds. **inactivating**
HIV-1 and other retroviruses by attacking highly conserved
zinc fingers in viral **nucleocapsid** protein)
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT 13982-39-3, **Zinc-65**, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(detection of **zinc** dissoecn. from **zinc**
finger in relation to identification and use of compds.
inactivating HIV-1 and other retroviruses by
attacking highly conserved **zinc fingers** in viral
nucleocapsid protein)
RN 13982-39-3 HCAPLUS
CN Zinc, isotope of mass 65 (8CI, 9CI) (CA INDEX NAME)

 ^{65}Zn

IT 7439-89-6, Iron, biological studies 7439-89-6D, Iron,
complexes
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ferric ion; identification and use of compds. **inactivating**
HIV-1 and other retroviruses by attacking highly conserved
zinc fingers in viral **nucleocapsid** protein)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

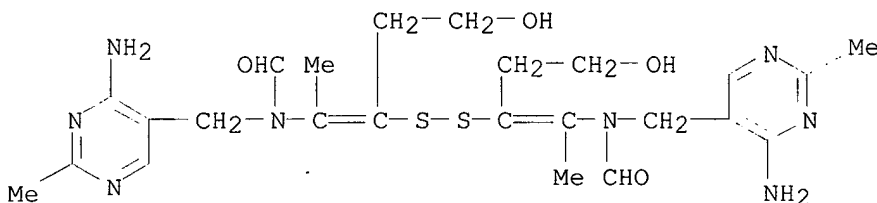
IT 67-16-3, Thiamine disulfide 69-78-3 94-37-1, Dicyclopentamethylenethiuram disulfide 97-77-8, Tetraethylthiuram disulfide 100-32-3 120-78-5 128-53-0, N-Ethylmaleimide 137-26-8, Tetramethylthiuram disulfide 502-55-6, O,O-Diethyldithiobis(thioformate) 537-91-7, Bis 3-Nitrophenyl disulfide 589-32-2 644-32-6, Benzoyl disulfide 1119-62-6, 3,3-Dithiobispropionic acid 1141-88-4 1634-02-2, Tetrabutylthiuram disulfide 2127-03-9, Aldrithiol-2 2461-75-8 2645-22-9, Aldrithiol-4 2889-13-6 3696-28-4 3808-87-5, Bis 2,4,5-Trichlorophenyl disulfide 4136-91-8, Tetraisopropylthiuram disulfide 4490-97-5 5397-29-5 14193-38-5, trans-1,2-Dithiane-4,5-diol 14370-67-3, p-Tolyl disulfoxide 14807-75-1, Formamidine disulfide dihydrochloride 15658-35-2 16766-09-9 20201-05-2, Bis 2-Chloro-5-nitrophenyl disulfide 24696-61-5, 2,4-Dinitrophenyl p-tolyl disulfide 29124-55-8 29581-98-4 33174-74-2, 2,2-Dithiobis(benzonitrile) 35964-48-8 38262-57-6 61747-35-1 66546-28-9 72687-29-7 178487-70-2

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(identification and use of compds. **inactivating HIV** -1 and other retroviruses by attacking highly conserved **zinc fingers** in viral **nucleocapsid** protein)

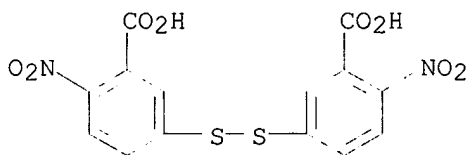
RN 67-16-3 HCAPLUS

CN Formamide, N,N'-[dithiobis[2-(2-hydroxyethyl)-1-methyl-2,1-ethenediyl]]bis[N-[(4-amino-2-methyl-5-pyrimidinyl)methyl]- (9CI) (CA INDEX NAME)



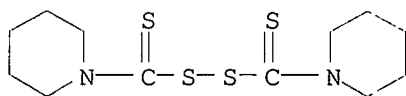
RN 69-78-3 HCAPLUS

CN Benzoic acid, 3,3'-dithiobis[6-nitro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

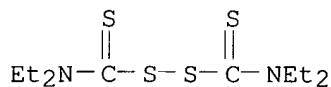


RN 94-37-1 HCAPLUS

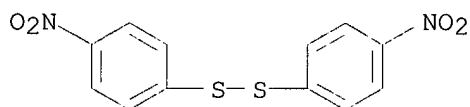
CN Piperidine, 1,1'-(dithiodicarbonothioyl)bis- (9CI) (CA INDEX NAME)



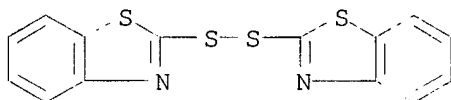
RN 97-77-8 HCAPLUS
 CN Thioperoxydicarbonic diamide ([(H₂N)C(S)]₂S₂), tetraethyl- (9CI) (CA INDEX NAME)



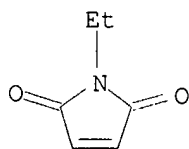
RN 100-32-3 HCAPLUS
 CN Disulfide, bis(4-nitrophenyl) (9CI) (CA INDEX NAME)



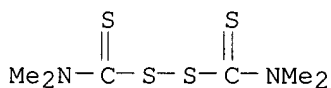
RN 120-78-5 HCAPLUS
 CN Benzothiazole, 2,2'-dithiobis- (8CI, 9CI) (CA INDEX NAME)



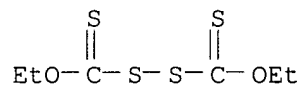
RN 128-53-0 HCAPLUS
 CN 1H-Pyrrole-2,5-dione, 1-ethyl- (9CI) (CA INDEX NAME)



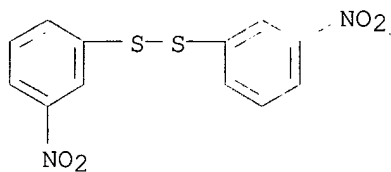
RN 137-26-8 HCAPLUS
 CN Thioperoxydicarbonic acid ([(H₂N)C(S)]₂S₂), tetramethyl- (9CI) (CA INDEX NAME)



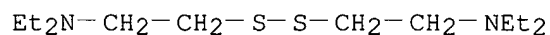
RN 502-55-6 HCAPLUS
 CN Thioperoxydicarbonic acid ([(HO)C(S)]₂S₂), diethyl ester (9CI) (CA INDEX NAME)



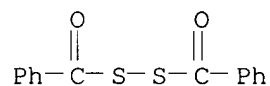
RN 537-91-7 HCAPLUS
 CN Disulfide, bis(3-nitrophenyl) (9CI) (CA INDEX NAME)



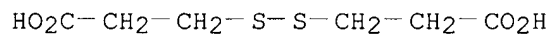
RN 589-32-2 HCAPLUS
 CN Ethanamine, 2,2'-dithiobis[N,N-diethyl- (9CI) (CA INDEX NAME)



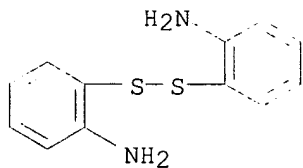
RN 644-32-6 HCAPLUS
 CN Disulfide, dibenzoyl (9CI) (CA INDEX NAME)



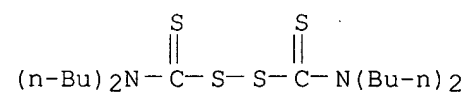
RN 1119-62-6 HCAPLUS
 CN Propanoic acid, 3,3'-dithiobis- (9CI) (CA INDEX NAME)



RN 1141-88-4 HCAPLUS
 CN Benzenamine, 2,2'-dithiobis- (9CI) (CA INDEX NAME)

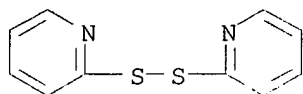


RN 1634-02-2 HCAPLUS
 CN Thioperoxydicarbonic diamide ([(H2N)C(S)]2S2), tetrabutyl- (9CI) (CA INDEX NAME)



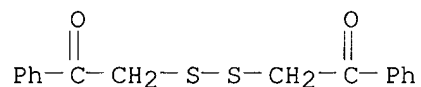
RN 2127-03-9 HCAPLUS

CN Pyridine, 2,2'-dithiobis- (9CI) (CA INDEX NAME)



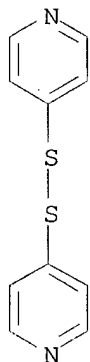
RN 2461-75-8 HCAPLUS

CN Ethanone, 2,2'-dithiobis[1-phenyl- (9CI) (CA INDEX NAME)



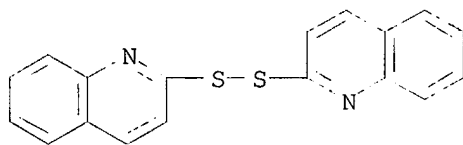
RN 2645-22-9 HCAPLUS

CN Pyridine, 4,4'-dithiobis- (9CI) (CA INDEX NAME)



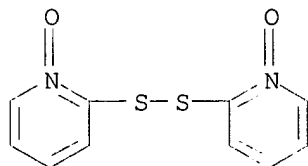
RN 2889-13-6 HCAPLUS

CN Quinoline, 2,2'-dithiobis- (9CI) (CA INDEX NAME)



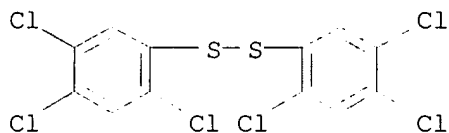
RN 3696-28-4 HCAPLUS

CN Pyridine, 2,2'-dithiobis-, 1,1'-dioxide (9CI) (CA INDEX NAME)



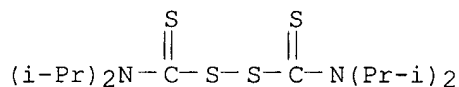
RN 3808-87-5 HCAPLUS

CN Disulfide, bis(2,4,5-trichlorophenyl) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



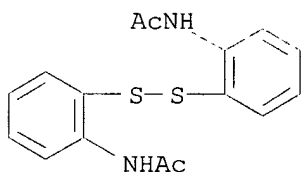
RN 4136-91-8 HCAPLUS

CN Thioperoxydicarbonic diamide $[(H_2N)C(S)]_2S_2$, tetrakis(1-methylethyl)-(9CI) (CA INDEX NAME)



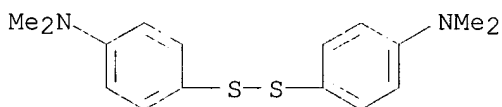
RN 4490-97-5 HCAPLUS

CN Acetamide, N,N'-(dithiodi-2,1-phenylene)bis- (9CI) (CA INDEX NAME)



RN 5397-29-5 HCAPLUS

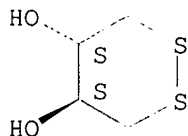
CN Benzenamine, 4,4'-dithiobis[N,N-dimethyl- (9CI) (CA INDEX NAME)



RN 14193-38-5 HCAPLUS

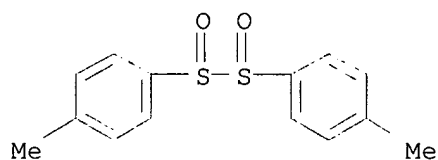
CN 1,2-Dithiane-4,5-diol, (4R,5R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

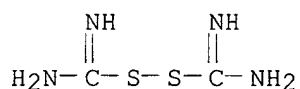


RN 14370-67-3 HCAPLUS

CN Disulfoxide, bis(4-methylphenyl) (9CI) (CA INDEX NAME)

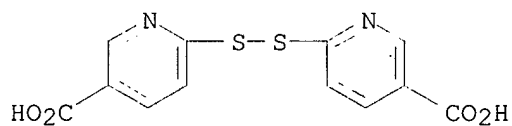


RN 14807-75-1 HCAPLUS
 CN Thioperoxydicarbonimidic diamide ($[(H_2N)C(NH)]_2S_2$), dihydrochloride (9CI)
 (CA INDEX NAME)

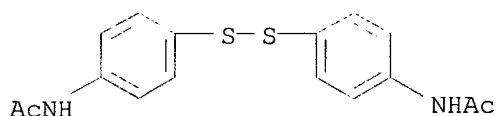


●2 HCl

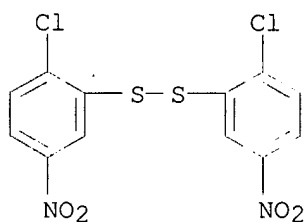
RN 15658-35-2 HCAPLUS
 CN 3-Pyridinecarboxylic acid, 6,6'-dithiobis- (9CI) (CA INDEX NAME)



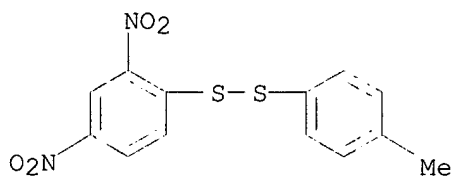
RN 16766-09-9 HCAPLUS
 CN Acetamide, N,N'-(dithiodi-4,1-phenylene)bis- (9CI) (CA INDEX NAME)



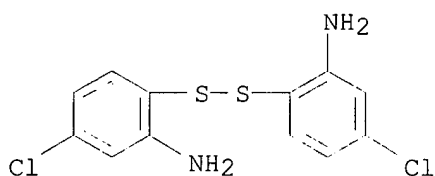
RN 20201-05-2 HCAPLUS
 CN Disulfide, bis(2-chloro-5-nitrophenyl) (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 24696-61-5 HCAPLUS
 CN Disulfide, 2,4-dinitrophenyl 4-methylphenyl (9CI) (CA INDEX NAME)

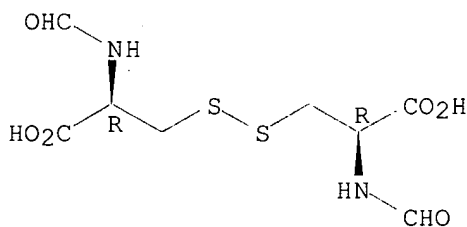


RN 29124-55-8 HCAPLUS
 CN Benzenamine, 2,2'-dithiobis[5-chloro- (9CI) (CA INDEX NAME)

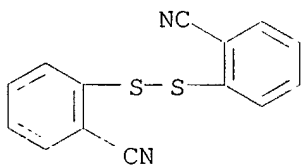


RN 29581-98-4 HCAPLUS
 CN L-Cystine, N,N'-diformyl- (9CI) (CA INDEX NAME)

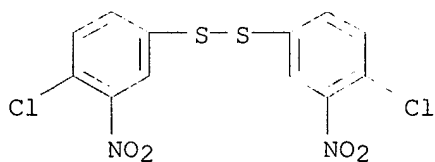
Absolute stereochemistry.



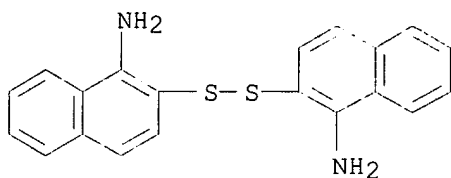
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 CN Benzonitrile, 2,2'-dithiobis- (9CI) (CA INDEX NAME)



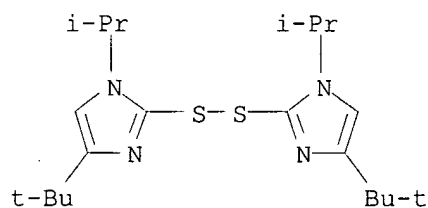
RN 35964-48-8 HCAPLUS
 CN Disulfide, bis(4-chloro-3-nitrophenyl) (9CI) (CA INDEX NAME)



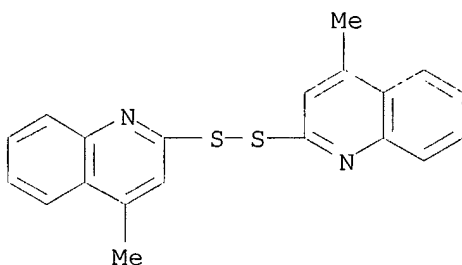
RN 38262-57-6 HCAPLUS
 CN 1-Naphthalenamine, 2,2'-dithiobis- (9CI) (CA INDEX NAME)



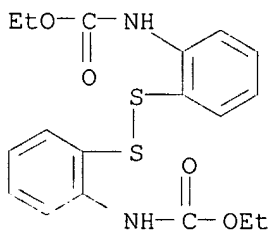
RN 61747-35-1 HCAPLUS
 CN 1H-Imidazole, 2,2'-dithiobis[4-(1,1-dimethylethyl)-1-(1-methylethyl)-
 (9CI) (CA INDEX NAME)



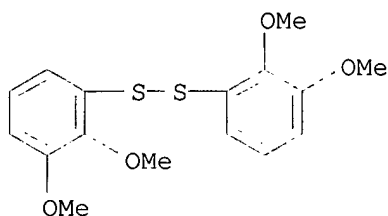
RN 66546-28-9 HCAPLUS
 CN Quinoline, 2,2'-dithiobis[4-methyl- (9CI) (CA INDEX NAME)



RN 72687-29-7 HCAPLUS
 CN Carbamic acid, (dithiodi-2,1-phenylene)bis-, diethyl ester (9CI) (CA
 INDEX NAME)



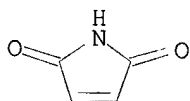
RN 178487-70-2 HCAPLUS
 CN Disulfide, bis(2,3-dimethoxyphenyl) (9CI) (CA INDEX NAME)



IT 7440-66-6, Zinc, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (identification and use of compds. **inactivating HIV**
 -1 and other retroviruses by attacking highly conserved **zinc**
fingers in viral **nucleocapsid** protein)
 RN 7440-66-6 HCAPLUS
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

IT 541-59-3D, Maleimide, derivs. 10102-43-9, Nitric oxide, biological studies 10102-43-9D, Nitric oxide, derivs.
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (identification and use of compds. **inactivating HIV**
 -1 and other retroviruses by attacking highly conserved **zinc**
fingers in viral **nucleocapsid** protein)
 RN 541-59-3 HCAPLUS
 CN 1H-Pyrrole-2,5-dione (9CI) (CA INDEX NAME)



RN 10102-43-9 HCAPLUS
 CN Nitrogen oxide (NO) (8CI, 9CI) (CA INDEX NAME)

N=O

RN 10102-43-9 HCAPLUS
 CN Nitrogen oxide (NO) (8CI, 9CI) (CA INDEX NAME)

N=O

L78 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2003 ACS
 AN 1996:350612 HCAPLUS
 DN 125:86322
 TI Aryl nitroso compounds as specific **inactivators** of retroviral (asymmetric) **zinc fingers** and as anti-tumor agents
 IN Kun, Ernest; Mendeleyev, Jerome
 PA Octamer, Inc., USA
 SO U.S., 28 pp., Cont.-in-part of U.S. Ser. No. 893,429, abandoned.

CODEN: USXXAM
 DT Patent
 LA English
 IC ICM C07C231-08
 NCL 564166000
 CC 25-19 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
 Section cross-reference(s): 1, 63

FAN.CNT 9

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-----------------------------------------------------------------------|------|----------|-----------------|--------------|
| PI | US 5516941 | A | 19960514 | US 1992-965541 | 19921102 <-- |
| | CA 2148455 | AA | 19940511 | CA 1993-2148455 | 19931004 <-- |
| | WO 9409776 | A1 | 19940511 | WO 1993-US9457 | 19931004 <-- |
| | W: AU, CA, JP | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | AU 9352986 | A1 | 19940524 | AU 1993-52986 | 19931004 <-- |
| | EP 666742 | A1 | 19950816 | EP 1993-923226 | 19931004 <-- |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | | |
| | JP 10504517 | T2 | 19980506 | JP 1993-511074 | 19931004 <-- |
| | US 5877185 | A | 19990302 | US 1995-377584 | 19950113 <-- |
| | US 5652260 | A | 19970729 | US 1995-488425 | 19950607 <-- |
| | US 5753674 | A | 19980519 | US 1995-488426 | 19950607 <-- |
| PRAI | US 1991-780809 | A2 | 19911022 | <-- | |
| | US 1992-893429 | B2 | 19920604 | <-- | |
| | US 1992-965541 | A | 19921102 | <-- | |
| | US 1993-60409 | B2 | 19930512 | <-- | |
| | US 1993-76313 | A2 | 19930611 | <-- | |
| | US 1993-87566 | A | 19930702 | <-- | |
| | WO 1993-US9457 | W | 19931004 | <-- | |

OS CASREACT 125:86322; MARPAT 125:86322

AB The subject invention provides for novel compds. for **inactivating** viruses, including 6-nitroso-1,2-benzopyrone, 3-nitrosobenzamide, 5-nitroso-1(2H)isoquinolinone, 7-nitroso-1(2H)isoquinolinone, and 8-nitroso-1(2H)isoquinolinone. The prodn. of 3-nitrosobenzamide comprises the oxidn. of 3-aminobenzamide, pptn. of 3-nitrosobenzamide and 3,3'-azoxybenzamide, and recrystn. of substantially pure 3-nitrosobenzamide. Thus, a soln. of 3-aminobenzamide (5.0 g) in DMF (25 mL) at ice-bath temp. was added to a soln. of 3-chloroperoxybenzoic acid (2.1 equiv) in DMF (25 mL) at 0.degree.-5.degree.; filtration (to remove 3,3'-azoxybenzamide) and workup afforded 3-nitrosobenzamide (mostly as the tan dimer) contg. residual 3,3'-azoxybenzamide; further purifn. involving treatment with aq. HOAc to dissolve the dimer into the solid monomer afforded 3-nitrosobenzamide in 37% overall yield. 3-Nitrosobenzamide exhibited IC50 = 15 .mu.M for inhibition of ADP-ribose transferase (ADPRT) (E.C. 4.2.30), inhibited 3H-thymidine uptake in various human leukemia cell lines at a concn. of 10 .mu.M, and at 10 .mu.M caused a three log decrease in the **HIV-1** infectivity titer. An NMR study demonstrated that 3-nitrosobenzamide reacted stoichiometrically with the N-terminal **CCHC zinc finger** of **HIV -1 nucleocapsid** protein, resulting in the ejection of Zn2+.

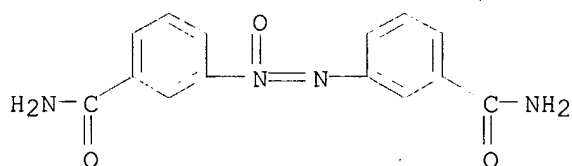
ST antiretroviral nitrosoarene prepn **zinc finger** deactivation; retroviral **zinc finger** deactivation nitrosoarene; antitumor aryl nitroso compd; **HIV** inhibitor aryl nitroso compd; ADP ribose transferase inhibitor nitrosoarene

IT Neoplasm inhibitors
 (aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)

IT Nucleic acids
 RL: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
 (dissoctn. of **HIV-1 zinc finger-nucleic acid complex**; aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as

- anti-tumor agents)
- IT Proteins, specific or class
 RL: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
 (retroviral **nucleocapsid**; aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- IT Nitroso compounds
 RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
 (aryl, aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- IT Virus, animal
 (human immunodeficiency 1, aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- IT Conformation and Conformers
 (**zinc-finger** motif, aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- IT 64-19-7, Acetic acid, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (aq. recrystn. solvent; aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- IT 130506-22-8P, 6-Nitroso-1,2-benzopyrone 144189-66-2P, 3-Nitrosobenzamide 149095-76-1P, 5-Nitroso-1(2H)-isoquinolinone 149095-77-2P, 7-Nitroso-1(2H)-isoquinolinone
 RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
 (aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- IT 142404-02-2, 5-Iodo-6-nitroso-1,2-benzopyrone
 RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- IT 58319-92-9
 RL: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
 (aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- IT 156730-41-5P, 3,3'-Azoxybenzamide
 RL: BYP (Byproduct); PREP (Preparation)
 (aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- IT 491-30-5, Isocarbostyryl 937-14-4, 3-Chloroperoxybenzoic acid 3544-24-9, 3-Aminobenzamide 63989-79-7, 6-Amino-1,2-benzopyrone hydrochloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- IT 20141-83-7P, 7-Nitro-1(2H)-isoquinolinone 82827-08-5P, 5-Nitro-1(2H)-isoquinolinone 93117-08-9P, 5-Amino-1(2H)-isoquinolinone 174302-45-5P, 3-Nitrosobenzamide dimer 174302-46-6P, 7-Amino-1(2H)-isoquinolinone
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

- (Reactant or reagent)
(aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- IT 7440-66-6, **Zinc**, biological studies
RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study)
(ejection from **zinc fingers**; aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- IT 14415-44-2, 6-Amino-1,2-benzopyrone 137881-27-7, 6-Amino-5-iodo-1,2-benzopyrone
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(nitroso precursor; aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- IT 497-19-8, Sodium carbonate, uses
RL: NUU (Other use, unclassified); USES (Uses)
(pptn. agent; aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- IT 68-12-2, DMF, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- IT 156730-41-5P, 3,3'-Azoxybenzamide
RL: BYP (Byproduct); PREP (Preparation)
(aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- RN 156730-41-5 HCAPLUS
CN Benzamide, 3,3'-azoxybis- (9CI) (CA INDEX NAME)



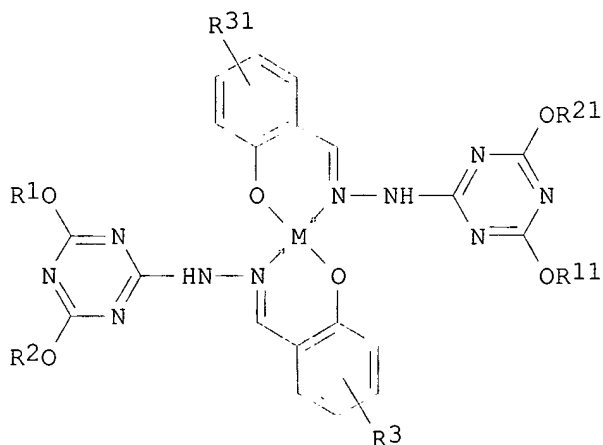
- IT 7440-66-6, **Zinc**, biological studies
RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study)
(ejection from **zinc fingers**; aryl nitroso compds. as specific **inactivators** of retroviral (asym.) **zinc fingers** and as anti-tumor agents)
- RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L78 ANSWER 4 OF 24 HCAPLUS COPYRIGHT 2003 ACS
AN 1996:301103 HCAPLUS
DN 124:330782
TI Preparation of salicylhydrazinotriazine chelates as antioxidant drugs.
PA Medico Pharma Vertriebs- Gmbh, Germany
SO Ger. Offen., 5 pp.

CODEN: GWXXBX
 DT Patent
 LA German
 IC ICM C07D251-46
 ICS C07F001-08; A61K031-53; A61K031-28; A61K031-095; C07F003-06;
 C07F003-08; C07F013-00
 ICA C07D251-26
 CC 78-7 (Inorganic Chemicals and Reactions)
 Section cross-reference(s): 1, 28
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------------|-----------------|--------------|
| PI | DE 4431176 | A1 | 19960307 | DE 1994-4431176 | 19940901 <-- |
| | WO 9606836 | A2 | 19960307 | WO 1995-EP3427 | 19950831 <-- |
| | WO 9606836 | A3 | 19960523 | | |
| | W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM | | | | |
| | RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| | AU 9535195 | A1 | 19960322 | AU 1995-35195 | 19950831 <-- |
| PRAI | DE 1994-4431176 | | 19940901 <-- | | |
| | WO 1995-EP3427 | | 19950831 <-- | | |
| OS | MARPAT 124:330782 | | | | |
| GI | | | | | |



I

AB Title compds. (I; M = divalent element; R1, R11, R2, R21 = alkyl; R3, R31 = H, halo, NO2, alkyl), were prepd. for treating viral infection, inflammation, autoimmune disease, neurodegenerative disease, and cancer (no data). Thus, salicylaldehyde 2,4-dimethoxy-1,3,5-triazinyl-6-hydrazone (prepn. given) in aq. NaOH at 60.degree. was treated with CuCl2 to give 88% I (R1, R11, R2, R21 = OMe; R3, R31 = H).

ST salicylhydrazinotriazine chelate prepn antioxidant drug;
 polyradiculoneuritis treatment salicylhydrazinotriazine chelate prepn;
 antiinflammatory antiviral anticancer salicylhydrazinotriazine chelate

IT Antioxidants
 (biol.; prepn. of salicylhydrazinotriazine chelates as antioxidant drugs)

IT Immunosuppressants
 Inflammation inhibitors
 Neoplasm inhibitors

Virucides and Virustats

(prepn. of salicylhydrazinotriazine chelates as antioxidant drugs)

- IT Autoimmune disease
Multiple sclerosis
(treatment; prepn. of salicylhydrazinotriazine chelates as antioxidant drugs)
- IT Nervous system
(disease, Guillain-Barre syndrome, treatment; prepn. of salicylhydrazinotriazine chelates as antioxidant drugs)
- IT Nervous system
(disease, degeneration, treatment; prepn. of salicylhydrazinotriazine chelates as antioxidant drugs)
- IT Virus, animal
(herpes, infection from, treatment; prepn. of salicylhydrazinotriazine chelates as antioxidant drugs)
- IT **Virus, animal**
(**human immunodeficiency**, treatment of **HIV** infection; prepn. of salicylhydrazinotriazine chelates as antioxidant drugs)
- IT 7439-96-5DP, Manganese, salicylhydrazinotriazine complexes 7440-43-9DP, Cadmium, salicylhydrazinotriazine complexes **7440-50-8DP**, Copper, salicylhydrazinotriazine complexes **7440-66-6DP**, Zinc, salicylhydrazinotriazine complexes 7782-49-2DP, Selenium, salicylhydrazinotriazine complexes 176541-70-1P 176541-71-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of salicylhydrazinotriazine chelates as antioxidant drugs)
- IT 90-02-8, Salicylaldehyde, reactions 302-01-2, Hydrazine, reactions 698-27-1, 4-MethylSalicylaldehyde 3140-73-6, 2,4-Dimethoxy-6-chloro-1,3,5-triazine
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of salicylhydrazinotriazine chelates as antioxidant drugs)
- IT 13882-61-6P, 2,4-Dimethoxy-6-hydrazino-1,3,5-triazine 145855-02-3P 176541-72-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of salicylhydrazinotriazine chelates as antioxidant drugs)
- IT **7440-50-8DP**, Copper, salicylhydrazinotriazine complexes **7440-66-6DP**, Zinc, salicylhydrazinotriazine complexes
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of salicylhydrazinotriazine chelates as antioxidant drugs)
- RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L78 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 2003 ACS
AN 1996:128017 HCAPLUS
DN 124:194289
TI Cage compounds, their preparation and use as antiviral agents

IN Marcuccio, Sebastian Mario; Turner, Kathleen Anne; Holan, George; Osvath, Peter; Sargeson, Alan Mcleod; Weigold, Helmut; Geue, Rodney
 PA Commonwealth Scientific and Industrial Research, Australia
 SO PCT Int. Appl., 58 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K031-555
 ICS C07D487-08; C07D495-08; C07D513-08
 CC 1-5 (Pharmacology)
 Section cross-reference(s): 28, 63

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|-----------------|--------------|
| PI | WO 9531202 | A1 | 19951123 | WO 1995-AU283 | 19950517 <-- |
| | W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| | AU 9524397 | A1 | 19951205 | AU 1995-24397 | 19950517 <-- |
| | ZA 9504017 | A | 19960117 | ZA 1995-4017 | 19950517 <-- |
| PRAI | AU 1994-5656 | | 19940517 | <-- | |
| | AU 1994-5720 | | 19940519 | <-- | |
| | WO 1995-AU283 | | 19950517 | <-- | |
| OS | CASREACT 124:194289; MARPAT 124:194289 | | | | |
| GI | For diagram(s), see printed CA Issue. | | | | |
| AB | A method of treatment and/or prophylaxis of a viral infection comprises administration of a cage compd. [I; M = metal capable of forming hexacoordinate complexes; p = 1-6; m, n = 0, 1; A1-A6 = NH, N, O, S; R1, R2 = H, halo, NO2, CN, (substituted) alkyl, OH, (substituted) alkoxy, (substituted) amino, etc.; other positions may be variously substituted]. I are prepd. by reacting a metal complex having .gtoreq.3 terminal NH2 groups with HCHO, a base, and a nucleophile optionally contg. a functional group which may react with any coordinated amine also present on the metal complex, leading to encapsulation and formation of a cage mol. Thus, Co complex II [X = Me; Y = (C8H17)2N(CH2)2NH] showed an ED50 of 0.53 .mu.M against HIV-1 in MT-4 cells in vitro, and 3 .mu.M against duck hepatitis B virus in primary duck hepatocyte cultures. The compds. were nontoxic to mice at .ltoreq.50 mg/kg. [Co(sen)].Cl3 [sen = 5-(4-amino-2-azabutyl)-5-methyl-3,7-diazanonane-1,9-diamine] reacted with paraformaldehyde and n-butanal in MeCN in the presence of NaClO4 to form II (X = Me; Y = Et). Controlled-release tablets were prepd. by wet granulation of active ingredient 500, hydroxypropylmethylcellulose 112, lactose 53, and povidone 28 mg, followed by addn. of 7 mg Mg stearate and compression. | | | | |
| ST | cage compd prepn virucide; metal cage complex virucide | | | | |
| IT | Encephalitis (-arthritis, in dog, virus-induced; cage compds.: prepn. and use as antiviral agents) | | | | |
| IT | Acquired immune deficiency syndrome Dengue Veterinary medicine Virucides and Virustats Yellow fever (cage compds.: prepn. and use as antiviral agents) | | | | |
| IT | Nucleophiles RL: RCT (Reactant); RACT (Reactant or reagent) (cage compds.: prepn. and use as antiviral agents) | | | | |
| IT | Alkali metals, biological studies Alkaline earth metals | | | | |

Transition metals, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(clathrates; cage compds.: prepn. and use as antiviral agents)

IT Duck

(hepatitis in; cage compds.: prepn. and use as antiviral agents)

IT Felis catus

(virus-induced arthritis in; cage compds.: prepn. and use as antiviral agents)

IT Canis familiaris

(virus-induced arthritis/encephalitis in; cage compds.: prepn. and use as antiviral agents)

IT Hepatitis

(B, cage compds.: prepn. and use as antiviral agents)

IT Hepatitis

(C, cage compds.: prepn. and use as antiviral agents)

IT Group VIII element compounds

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(Group 9, complexes, clathrates; cage compds.: prepn. and use as antiviral agents)

IT Virus, animal

(Japanese encephalitis, cage compds.: prepn. and use as antiviral agents)

IT Neoplasm inhibitors

(adult, T-cell leukemia, cage compds.: prepn. and use as antiviral agents)

IT Inflammation inhibitors

(antiarthritics, for virus-induced canine arthritis/encephalitis and feline arthritis; cage compds.: prepn. and use as antiviral agents)

IT Cyclic compounds

Heterocyclic compounds

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(cage, cage compds.: prepn. and use as antiviral agents)

IT Inclusion compounds

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(clathrates, cage compds.: prepn. and use as antiviral agents)

IT Virus, animal

(cytomegalo-, cage compds.: prepn. and use as antiviral agents)

IT Virus, animal

(flavi-, cage compds.: prepn. and use as antiviral agents)

IT Virus, animal

(hepadna, cage compds.: prepn. and use as antiviral agents)

IT Virus, animal

(herpes, cage compds.: prepn. and use as antiviral agents)

IT Virus, animal

(herpes simplex 2, herpes genitalis from, cage compds.: prepn. and use as antiviral agents)

IT Virus, animal

(herpes simplex, herpes simplex labialis from, cage compds.: prepn. and use as antiviral agents)

IT Mononucleosis

(infectious, cage compds.: prepn. and use as antiviral agents)

IT Hepatitis

(non-A, non-B, cage compds.: prepn. and use as antiviral agents)

IT Amines, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(poly-, cage compds.: prepn. and use as antiviral agents)

IT **Virus, animal**
(retro-, cage compds.: prepn. and use as antiviral agents)

IT Amines, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(tri-, cage compds.: prepn. and use as antiviral agents)

IT **Virus, animal**
(varicella-zoster, herpes zoster from, cage compds.: prepn. and use as antiviral agents)

IT **Virus, animal**
(varicella-zoster, varicella from, cage compds.: prepn. and use as antiviral agents)

IT 85663-94-1P
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(cage compds.: prepn. and use as antiviral agents)

IT 85663-96-3
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(cage compds.: prepn. and use as antiviral agents)

IT 173781-88-9P 173781-93-6P 173781-94-7P 173782-15-5P 173782-16-6P
173782-21-3P 173782-34-8P 173782-42-8P 173782-43-9P 173782-47-3P
173782-50-8P 173782-51-9P 173935-93-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(cage compds.: prepn. and use as antiviral agents)

IT 7439-88-5D, Iridium, clathrates **7439-89-6D**, Iron, clathrates
7439-93-2D, Lithium, clathrates 7439-95-4D, Magnesium, clathrates
7439-96-5D, Manganese, clathrates 7439-97-6D, Mercury, clathrates
7440-02-0D, Nickel, clathrates 7440-06-4D, Platinum, clathrates
7440-18-8D, Ruthenium, clathrates 7440-22-4D, Silver, clathrates
7440-23-5D, Sodium, clathrates 7440-32-6D, Titanium, clathrates
7440-43-9D, Cadmium, clathrates 7440-47-3D, Chromium, clathrates
7440-48-4D, Cobalt, clathrates **7440-50-8D**, Copper, clathrates
7440-62-2D, Vanadium, clathrates **7440-66-6D**, Zinc, clathrates
7440-74-6D, Indium, clathrates 71935-78-9 85664-04-6
85664-05-7 85664-06-8 85664-07-9 85664-12-6 91002-83-4
91002-85-6 91002-89-0 107247-40-5 109636-90-0 114595-74-3
121858-89-7 129942-30-9 136230-86-9 158252-47-2 165600-27-1
165600-32-8 165600-33-9 173781-75-4 173781-76-5 173781-77-6
173781-78-7 173781-79-8 173781-80-1 173781-81-2 173781-82-3
173781-83-4 173781-84-5 173781-85-6 173781-86-7 173781-87-8
173781-89-0 173781-90-3 173781-91-4 173781-92-5 173781-95-8
173781-96-9 173781-97-0 173781-98-1 173781-99-2 173782-00-8
173782-01-9 173782-02-0 173782-03-1 173782-04-2 173782-05-3
173782-06-4 173782-07-5 173782-08-6 173782-09-7 173782-10-0
173782-11-1 173782-12-2 173782-13-3 173782-14-4 173782-17-7
173782-18-8 173782-19-9 173782-20-2 173782-22-4 173782-23-5
173782-24-6 173782-25-7 173782-26-8 173782-27-9 173782-28-0
173782-29-1 173782-30-4 173782-31-5 173782-32-6 173782-33-7
173782-35-9 173782-36-0 173782-37-1 173782-38-2 173782-39-3
173782-40-6 173782-41-7 173782-44-0 173782-45-1 173782-46-2
173782-48-4 173782-49-5 173782-52-0 173782-53-1 173782-54-2
173782-55-3 173782-56-4 173782-57-5 173782-59-7 173782-60-0
173782-61-1 173782-63-3 173935-87-0 173935-88-1 173935-89-2
173935-90-5 173935-91-6 173935-92-7 173935-94-9 173935-95-0
173935-96-1 173935-97-2 173935-98-3 173935-99-4 173936-00-0
173936-01-1 173936-02-2 173936-03-3 173936-04-4 173936-05-5
173936-06-6 173936-07-7 173936-08-8 173936-09-9 173936-10-2

173936-11-3 173936-12-4 173936-13-5 173936-14-6 173936-15-7
173936-16-8 174060-23-2 174171-98-3 174171-99-4 174172-00-0
174388-83-1

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(cage compds.: prepn. and use as antiviral agents)

IT 50-00-0, Formaldehyde, reactions 123-72-8, n-Butanal 7084-11-9,
1-(3-Dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride 13408-73-6
30525-89-4, Paraformaldehyde 82796-46-1 174172-01-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(cage compds.: prepn. and use as antiviral agents)

IT 7439-89-6D, Iron, clathrates 7440-50-8D, Copper,
clathrates 7440-66-6D, Zinc, clathrates

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(cage compds.: prepn. and use as antiviral agents)

RN 7439-89-6 HCAPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7440-50-8 HCAPLUS

CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS

CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L78 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2003 ACS

AN 1996:87552 HCAPLUS

DN 124:260865

TI Adenosine diphosphoribose polymerase binding nitroso aromatic compounds
useful as retroviral **inactivating** agents, anti-retroviral agents
and anti-tumor agents

IN Kun, Ernest; Mendeleyev, Jerome

PA Octamer, Inc., USA

SO U.S., 27 pp. Cont.-in-part of U.S. Ser. No. 893, 429, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC ICM A61K031-165

ICS C07C233-65

NCL 514619000

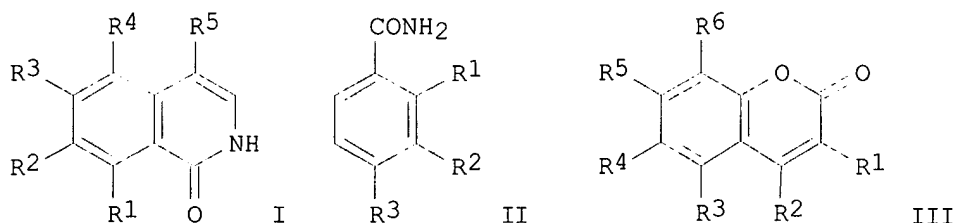
CC 27-17 (Heterocyclic Compounds (One Hetero. Atom))

Section cross-reference(s): 1, 25, 63

FAN.CNT 9

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|--------------|
| PI | US 5482975 | A | 19960109 | US 1993-21830 | 19930224 <-- |
| PRAI | US 1991-780809 | B2 | 19911022 | <-- | |
| | US 1992-893429 | B2 | 19920604 | <-- | |

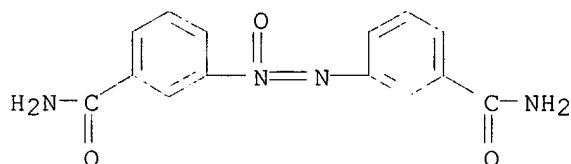
OS MARPAT 124:260865
GI



- AB The subject invention provides for novel compds. I-III wherein, for I: R1, R2, R3, R4, and R5 are selected from the group consisting of hydrogen and nitroso, and only one of R1, R2, R3, R4, and R5 is a nitroso group; for II: R1, R2, R3 are selected from the group consisting of hydrogen and nitroso, and only one of R1, R2, R3 is a nitroso group; for III: R1, R2, R3, R4, R5, R6 are selected from the group consisting of hydrogen and nitroso, and only one of R1, R2, R3, R4, R5, R6 is a nitroso group, for **inactivating** viruses. These compds. include 6-nitroso-1,2-benzopyrone, 3-nitrosobenzamide, 5-nitroso-1(2H)-isoquinolinone, 7-nitroso-1(2H)isoquinolinone, and 8-nitroso-1(2H)isoquinolinone. The invention also provides for compns. contg. one or more of the compds., and for methods of treating viral infections, cancer, infectious virus concn. with the subject compds. and compns. Thus, e.g., oxidn. of 6-amino-1,2-benzopyrone hydrochloride in presence of sodium tungstate/H2O2 afforded 6-nitroso-1,2-benzopyrone which exhibited inhibition of the polymerase activity of ADPRT with IC50 = 40 .mu.M and a 3-log decrease of the **HIV-1** infectivity titer at 10 .mu.M.
- ST nitroso arom adenosine diphosphoribose polymerase binding; antiretroviral nitroso arom; antitumor nitroso arom
- IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**HIV-1 zinc finger nucleocapsid**
; adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT Neoplasm inhibitors
(adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT Nucleoproteins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(disruption of nucleic acid binding by **zinc finger** of **HIV-1 nucleocapsid** protein; adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT Nitroso compounds
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(aryl, adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT **Virus, animal**
(**human immunodeficiency 1**, adenosine

- diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT Conformation and Conformers
(**zinc-finger** motif, adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 130506-22-8P, 6-Nitroso-1,2-benzopyrone 144189-66-2P, 3-Nitrosobenzamide 149095-76-1P, 5-Nitroso-1(2H)-isoquinolinone 149095-77-2P, 7-Nitroso-1(2H)-isoquinolinone
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 142404-02-2, 5-Iodo-6-nitroso-1,2-benzopyrone
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 58319-92-9
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 156730-41-5P
RL: BYP (Byproduct); PREP (Preparation)
(adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 491-30-5, Isocarbostyryl 3544-24-9, 3-Aminobenzamide 63989-79-7, 6-Amino-1,2-benzopyrone hydrochloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 93117-08-9P, 5-Amino-1(2H)-isoquinolinone 174302-45-5P, 3-Nitrosobenzamide dimer 174302-46-6P, 7-Amino-1(2H)-isoquinolinone
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 14415-44-2, 6-Amino-1,2-benzopyrone 137881-27-7
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(biochem. precursor of nitroso compd.; adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 7440-66-6, Zinc, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(ejection from **zinc finger** of HIV-1 **nucleocapsid** protein; adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating**

agents, anti-retroviral agents and anti-tumor agents)
 IT 156730-41-5P
 RL: BYP (Byproduct); PREP (Preparation)
 (adenosine diphosphoribose polymerase binding nitroso arom. compds.
 useful as retroviral **inactivating** agents, anti-retroviral
 agents and anti-tumor agents)
 RN 156730-41-5 HCAPLUS
 CN Benzamide, 3,3'-azoxybis- (9CI) (CA INDEX NAME)



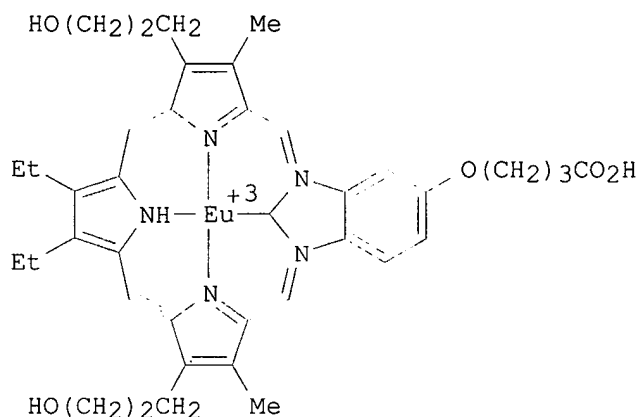
IT 7440-66-6, Zinc, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (ejection from **zinc finger** of HIV-1
nucleocapsid protein; adenosine diphosphoribose polymerase
 binding nitroso arom. compds. useful as retroviral **inactivating**
 agents, anti-retroviral agents and anti-tumor agents)
 RN 7440-66-6 HCAPLUS
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L78 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 2003 ACS
 AN 1996:56236 HCAPLUS
 DN 124:81470
 TI Texaphyrin immobilization on solid supports and medical devices
 IN Sessler, Jonathan L.; Iverson, Brent L.; Kral, Vladimir; Thomas, Richard
 E.; Smith, Daniel A.; Magda, Darren
 PA Board of Reagents, the University of Texas System, USA; Pharmacyclics,
 Inc.
 SO PCT Int. Appl., 128 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K047-48
 ICS A61K031-395; A61L002-08; B01J031-22; C12Q001-68; A61K049-00;
 B01D015-08
 CC 9-3 (Biochemical Methods)
 Section cross-reference(s): 63, 78

FAN.CNT 7

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-----------------------------------------------------------------------|------|--------------|-----------------|--------------|
| PI | WO 9529702 | A1 | 19951109 | WO 1995-US5421 | 19950428 <-- |
| | W: JP | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | EP 758250 | A1 | 19970219 | EP 1995-920377 | 19950428 <-- |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | | |
| | JP 09512557 | T2 | 19971216 | JP 1995-528480 | 19950428 <-- |
| PRAI | US 1994-236218 | | 19940428 <-- | | |
| | WO 1995-US5421 | | 19950428 <-- | | |
| OS | MARPAT 124:81470 | | | | |
| GI | | | | | |



- AB Novel matrix-supported texaphyrins are provided in which a polymeric or solid matrix is covalently modified by the addn. of .gtoreq.1 texaphyrin or texaphyrin deriv. Polymer-supported texaphyrins may be used as chromatog. supports, e.g., in the sepn. of neutral and anionic species, and in applications involving phosphate ester hydrolysis, other catalytic schemes, MRI, and photodynamic therapy. Thus, Eu-texaphyrincarboxylic acid I was treated with carbodiimide and 1-hydroxybenzotriazole and then coupled to 3-aminopropyl silica gel. A silica bead-supported lanthanide-texaphyrin complex was used to remove RNA contaminants from plasmid DNA by utilizing the susceptibility of RNA to hydrolysis by the lanthanide complex catalyst.
- ST texaphyrin immobilization catalyst chromatog
- IT Nucleic acid bases
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (conjugates with texaphyrins; texaphyrin immobilization on solid supports and medical devices)
- IT Plasmid and Episome
 (hydrolysis of; texaphyrin immobilization on solid supports and medical devices)
- IT Amides, reactions
 Esters, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (hydrolysis of; texaphyrin immobilization on solid supports and medical devices)
- IT Rare earth metals, analysis
 RL: ARU (Analytical role, unclassified); CAT (Catalyst use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
 (texaphyrin complexes; texaphyrin immobilization on solid supports and medical devices)
- IT Chemical warfare agents
 Fungicides and Fungistats
 Herbicides
 Hydrogenation catalysts
 Hydrolysis catalysts
 Medical goods
 Pesticides
 Photolysis catalysts
 Polymer-supported reagents
 Polymerization catalysts
Virucides and Virustats

(texaphyrin immobilization on solid supports and medical devices)

IT Polymers, analysis
RL: ANT (Analyte); DEV (Device component use); PUR (Purification or recovery); RCT (Reactant); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(texaphyrin immobilization on solid supports and medical devices)

IT Arsenates
Bromides, analysis
Carbohydrates and Sugars, analysis
Chlorides, analysis
Fluorides, analysis
Nitrates, analysis
Nucleotides, analysis
Phosphates, analysis
Pseudohalides
Sulfates, analysis
Sulfonates
RL: ANT (Analyte); PUR (Purification or recovery); ANST (Analytical study); PREP (Preparation)

(texaphyrin immobilization on solid supports and medical devices)

IT Deoxyribonucleic acids
Ribonucleic acids
RL: ANT (Analyte); PUR (Purification or recovery); RCT (Reactant); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent)

(texaphyrin immobilization on solid supports and medical devices)

IT Ceramic materials and wares
Clays, uses
Glass, oxide
Latex
Polyamides, uses
Rubber, silicone, uses
Silica gel, uses
Siloxanes and Silicones, uses
Urethane polymers, uses
Zeolites, uses
RL: NUU (Other use, unclassified); USES (Uses)

(texaphyrin immobilization on solid supports and medical devices)

IT Coenzymes
RL: RCT (Reactant); RACT (Reactant or reagent)

(texaphyrin immobilization on solid supports and medical devices)

IT Phospholipids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)

(texaphyrin immobilization on solid supports and medical devices)

IT Imaging
(NMR, contrast agents, texaphyrin immobilization on solid supports and medical devices)

IT Joint, anatomical
(artificial, texaphyrin immobilization on solid supports and medical devices)

IT Electrophoresis and Ionophoresis
(capillary, texaphyrin immobilization on solid supports and medical devices)

IT Medical goods
(catheters, texaphyrin immobilization on solid supports and medical devices)

IT Phototherapy
(chemo-, texaphyrin immobilization on solid supports and medical devices)

IT Carbohydrates and Sugars, analysis
RL: ARU (Analytical role, unclassified); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PUR (Purification or recovery); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)

(conjugates, with texaphyrin; texaphyrin immobilization on solid supports and medical devices)

IT Amino acids, biological studies
Oligosaccharides
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates, with texaphyrin; texaphyrin immobilization on solid supports and medical devices)

IT Peptides, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates, with texaphyrins; texaphyrin immobilization on solid supports and medical devices)

IT Magnetic substances
(dia-, texaphyrin complexes; texaphyrin immobilization on solid supports and medical devices)

IT Virus, animal
(enveloped, texaphyrin immobilization on solid supports and medical devices)

IT Carboxylic acids, analysis
Sulfonic acids, analysis
RL: ANT (Analyte); PUR (Purification or recovery); ANST (Analytical study); PREP (Preparation)
(esters, texaphyrin immobilization on solid supports and medical devices)

IT **Virus, animal**
(**feline immunodeficiency**, texaphyrin immobilization on solid supports and medical devices)

IT Virus, animal
(herpes simplex, texaphyrin immobilization on solid supports and medical devices)

IT Chromatography, column and liquid
(high-performance, stationary phases, texaphyrin immobilization on solid supports and medical devices)

IT **Virus, animal**
(**human immunodeficiency**, texaphyrin immobilization on solid supports and medical devices)

IT Prosthetic materials and Prosthetics
(implants, texaphyrin immobilization on solid supports and medical devices)

IT Nucleotides, uses
RL: CAT (Catalyst use); USES (Uses)
(oligo-, deoxyribo-, aminoalkyl, conjugates with texaphyrin europium complexes, RNA site-specific hydrolysis by; texaphyrin immobilization on solid supports and medical devices)

IT Magnetic substances
(para-, texaphyrin complexes; texaphyrin immobilization on solid supports and medical devices)

IT **Virus, animal**
(**retro-**, texaphyrin immobilization on solid supports and medical devices)

IT Carboxylic acids, analysis
RL: ANT (Analyte); PUR (Purification or recovery); ANST (Analytical study); PREP (Preparation)
(salts, texaphyrin immobilization on solid supports and medical devices)

IT **Virus, animal**
(**simian immunodeficiency**, texaphyrin immobilization on solid supports and medical devices)

IT Chromatography
(stationary phases, texaphyrin immobilization on solid supports and

- medical devices)
- IT Transition metal compounds
 RL: ARU (Analytical role, unclassified); CAT (Catalyst use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
 (texaphyrin complexes, texaphyrin immobilization on solid supports and medical devices)
- IT Photodynamic action
 (therapeutic, texaphyrin immobilization on solid supports and medical devices)
- IT Acylation catalysts
 (trans-, texaphyrin immobilization on solid supports and medical devices)
- IT Amino acids, biological studies
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (D-, conjugates with texaphyrin; texaphyrin immobilization on solid supports and medical devices)
- IT 2415-43-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (hydrolysis of; texaphyrin immobilization on solid supports and medical devices)
- IT 7782-44-7P, Oxygen, preparation
 RL: PNU (Preparation, unclassified); PREP (Preparation)
 (singlet; texaphyrin immobilization on solid supports and medical devices)
- IT 1306-06-5, Hydroxylapatite
 RL: NUU (Other use, unclassified); USES (Uses)
 (sintered; texaphyrin immobilization on solid supports and medical devices)
- IT 7664-93-9DP, Sulfuric acid, esters 7697-37-2DP, Nitric acid, esters
 7723-14-0DP, Phosphorus, org. compds. 7778-39-4DP, Arsenic acid, esters
 13598-36-2DP, Phosphonic acid, esters
 RL: ANT (Analyte); PUR (Purification or recovery); ANST (Analytical study); PREP (Preparation)
 (texaphyrin immobilization on solid supports and medical devices)
- IT 7664-38-2DP, Phosphoric acid, esters
 RL: ANT (Analyte); PUR (Purification or recovery); RCT (Reactant); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent)
 (texaphyrin immobilization on solid supports and medical devices)
- IT **7439-89-6DP**, Iron, texaphyrin complexes 7440-02-0DP, Nickel, texaphyrin complexes 7440-48-4DP, Cobalt, texaphyrin complexes **7440-50-8DP**, Copper, texaphyrin complexes 7440-54-2DP, Gadolinium, texaphyrin complexes 115652-49-8DP, derivs.
 RL: ARU (Analytical role, unclassified); CAT (Catalyst use); DEV (Device component use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
 (texaphyrin immobilization on solid supports and medical devices)
- IT 7429-91-6DP, Dysprosium, texaphyrin complexes 7439-91-0DP, Lanthanum, texaphyrin complexes 7439-94-3DP, Lutetium, texaphyrin complexes 7439-96-5DP, Manganese, texaphyrin complexes 7439-97-6DP, Mercury, texaphyrin complexes 7440-00-8DP, Neodymium, texaphyrin complexes 7440-10-0DP, Praseodymium, texaphyrin complexes 7440-19-9DP, Samarium, texaphyrin complexes 7440-20-2DP, Scandium, texaphyrin complexes 7440-27-9DP, Terbium, texaphyrin complexes 7440-30-4DP, Thulium, texaphyrin complexes 7440-43-9DP, Cadmium, texaphyrin complexes 7440-45-1DP, Cerium, texaphyrin complexes 7440-52-0DP, Erbium, texaphyrin complexes 7440-53-1DP, Europium, texaphyrin complexes 7440-60-0DP, Holmium, texaphyrin complexes 7440-64-4DP, Ytterbium, texaphyrin complexes 7440-65-5DP, Yttrium, texaphyrin complexes **7440-66-6DP**, Zinc, texaphyrin complexes 7440-70-2DP, Calcium, texaphyrin complexes 7440-74-6DP, Indium, texaphyrin complexes

RL: ARU (Analytical role, unclassified); CAT (Catalyst use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)

(texaphyrin immobilization on solid supports and medical devices)

IT 115652-49-8D, multimers 134020-79-4D, Sapphyrin, multimers

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(texaphyrin immobilization on solid supports and medical devices)

IT 158272-82-3

RL: CAT (Catalyst use); USES (Uses)

(texaphyrin immobilization on solid supports and medical devices)

IT 74-85-1D, Ethene, halo, polymers 79-10-7D, 2-Propenoic acid, esters, polymers 1344-28-1, Alumina, uses 1398-61-4, Chitin 7631-86-9, Silica, uses 9002-86-2, Poly(vinyl chloride) 9002-88-4 9003-05-8, Polyacrylamide 9003-07-0, Polypropylene 9003-53-6 9003-69-4, Poly(divinylbenzene) 9004-34-6, Cellulose, uses 9005-32-7, Alginic acid 9012-36-6, Sepharose 9012-76-4, Chitosan 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Poly(lactic acid) 61029-13-8, Montmorillonite (AlH(SiO₃)₂) 172757-84-5

RL: NUU (Other use, unclassified); USES (Uses)

(texaphyrin immobilization on solid supports and medical devices)

IT 56-65-5P, 5'-ATP, preparation 58-61-7P, Adenosine, preparation 58-64-0P, 5'-ADP, preparation 60-92-4P, 3',5'-Cyclic AMP 61-19-8P, 5'-AMP, preparation 65-85-0P, Benzoic acid, preparation 98-11-3P, Benzenesulfonic acid, preparation 701-64-4P, Phenyl phosphate 838-85-7P, Diphenyl phosphate

RL: PUR (Purification or recovery); PREP (Preparation)

(texaphyrin immobilization on solid supports and medical devices)

IT 172757-81-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(texaphyrin immobilization on solid supports and medical devices)

IT 164388-50-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(texaphyrin immobilization on solid supports and medical devices)

IT 172757-80-1P

RL: SPN (Synthetic preparation); PREP (Preparation)

(texaphyrin immobilization on solid supports and medical devices)

IT 7439-89-6DP, Iron, texaphyrin complexes 7440-50-8DP, Copper, texaphyrin complexes

RL: ARU (Analytical role, unclassified); CAT (Catalyst use); DEV (Device component use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)

(texaphyrin immobilization on solid supports and medical devices)

RN 7439-89-6 HCAPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7440-50-8 HCAPLUS

CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT 7440-66-6DP, Zinc, texaphyrin complexes

RL: ARU (Analytical role, unclassified); CAT (Catalyst use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)

(texaphyrin immobilization on solid supports and medical devices)

RN 7440-66-6 HCAPLUS

CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L78 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 2003 ACS

AN 1996:34901 HCAPLUS

DN 124:202044

TI Adenosine diphosphoribose polymerase binding nitroso aromatic compounds
useful as retroviral **inactivating** agents, anti-retroviral agents
and anti-tumor agents

IN Kun, Ernest; Mendeleyev, Jerome

PA Octamer, Incorporated, USA

SO U.S., 27 pp. Cont.-in-part of U.S. Ser. No. 893,429, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC ICM C07D217-22

ICS A61K031-47

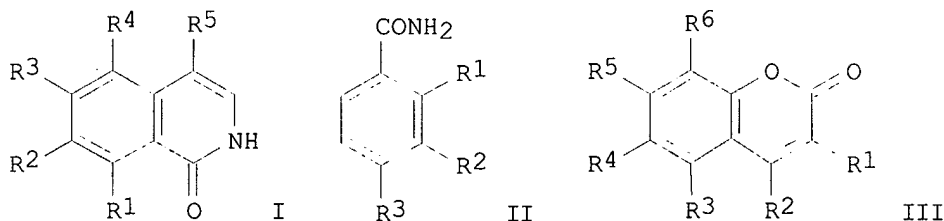
NCL 546141000

CC 27-17 (Heterocyclic Compounds (One Hetero Atom))

Section cross-reference(s): 1, 25, 63

FAN.CNT 9

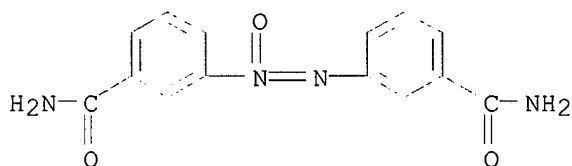
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-------------------|------|--------------|-----------------|--------------|
| PI | US 5473074 | A | 19951205 | US 1992-968989 | 19921030 <-- |
| PRAI | US 1991-780809 | A2 | 19911022 <-- | | |
| | US 1992-893429 | B2 | 19920604 <-- | | |
| OS | MARPAT 124:202044 | | | | |
| GI | | | | | |



AB The subject invention provides for novel anti-retroviral and anti-tumor compds. I-III wherein, for I: R1, R2, R3, R4, and R5 are selected from the group consisting of hydrogen and nitroso, and only one of R1, R2, R3, R4, and R5 is a nitroso group; for II: R1, R2, R3 are selected from the group consisting of hydrogen and nitroso, and only one of R1, R2, R3 is a nitroso group; for III: R1, R2, R3, R4, R5, R6 are selected from the group consisting of hydrogen and nitroso, and only one of R1, R2, R3, R4, R5, R6 is a nitroso group. These compds. include 6-nitroso-1,2-benzopyrone, 3-nitrosobenzamide, 5-nitroso-1(2H)-isoquinolinone, 7-nitroso-1(2H)-isoquinolinone, and 8-nitroso-1(2H)-isoquinolinone. The invention also provides for compns. contg. one or more of the compds., and for methods of treating viral infections, cancer, and infectious virus concn. with the subject compds. and compns. Thus, e.g., oxidn. of 6-amino-1,2-benzopyrone hydrochloride in presence of sodium tungstate/H₂O₂ afforded 6-nitroso-1,2-benzopyrone which exhibited inhibition of the polymerase activity of ADPRT with IC₅₀ = 40 .mu.M and a 3-log decrease of the

- HIV-1 infectivity titer at 10 .mu.M.**
- ST nitroso arom adenosine diphosphoribose polymerase binding; antiretroviral nitroso arom; antitumor nitroso arom
- IT Proteins, specific or class
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (**HIV-1 zinc finger nucleocapsid**
 ; adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT Neoplasm inhibitors
 (adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT Nucleoproteins
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (disruption of nucleic acid binding by **zinc finger** of **HIV-1 nucleocapsid** protein; adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT Nitroso compounds
 RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
 (aryl, adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT **Virus, animal**
 (**human immunodeficiency 1**, adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT Conformation and Conformers
 (**zinc-finger** motif, adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 130506-22-8P, 6-Nitroso-1,2-benzopyrone 144189-66-2P, 3-Nitrosobenzamide 149095-76-1P, 5-Nitroso-1(2H)-isoquinolinone 149095-77-2P, 7-Nitroso-1(2H)-isoquinolinone
 RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
 (adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 142404-02-2, 5-Iodo-6-nitroso-1,2-benzopyrone
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 58319-92-9
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 156730-41-5P, 3,3'-Azoxybenzamide

- RL: BYP (Byproduct); PREP (Preparation)
 (adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 491-30-5, Isocarbostyryl 3544-24-9, 3-Aminobenzamide 63989-79-7, 6-Amino-1,2-benzopyrone hydrochloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 93117-08-9P, 5-Amino-1(2H)-isoquinolinone 174302-45-5P, 3-Nitrosobenzamide dimer 174302-46-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 14415-44-2, 6-Amino-1,2-benzopyrone 137881-27-7
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (biochem. precursor of nitroso compd.; adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 7440-66-6, Zinc, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (ejection from **zinc finger** of HIV-1 **nucleocapsid** protein; adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- IT 156730-41-5P, 3,3'-Azoxybenzamide
 RL: BYP (Byproduct); PREP (Preparation)
 (adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- RN 156730-41-5 HCAPLUS
 CN Benzamide, 3,3'-azoxybis- (9CI) (CA INDEX NAME)



- IT 7440-66-6, Zinc, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (ejection from **zinc finger** of HIV-1 **nucleocapsid** protein; adenosine diphosphoribose polymerase binding nitroso arom. compds. useful as retroviral **inactivating** agents, anti-retroviral agents and anti-tumor agents)
- RN 7440-66-6 HCAPLUS
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

L78 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2003 ACS

AN 1996:13368 HCAPLUS

DN 124:175591

TI Preparation of threo-1,4-diamino-2,3-diols as intermediates for
HIV protease inhibitors

IN Inoe, Kenji; Fukae, Masabumi; Takahashi, Satomi

PA Kanegafuchi Chemical Ind, Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C07C215-18

ICS B01J031-38; C07C213-00; C07C215-28; C07C271-20

ICA C07B061-00

CC 25-7 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

Section cross-reference(s): 1, 21

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|-----------------|--------------|
| PI | JP 07258177 | A2 | 19951009 | JP 1994-49479 | 19940318 <-- |
| PRAI | JP 1994-49479 | | 19940318 | <-- | |
| OS | CASREACT 124:175591; MARPAT 124:175591 | | | | |
| AB | Threo-R2R3NCH(R1)CH(OH)CH(R1)NR2R3 (R1 = alkyl, aralkyl, aryl; R2, R3 = protecting group, H; R2 = R3 .noteq. H) are prepd. by reductive homocoupling of R2R3NCH(R1)CHO (R1-R3 = same as above) by (i) treatment with lower-valent Ti prepd. from TiCl4 complexes with THF, dioxane, or 1,2-dimethoxyethane (I) and Zn or Zn-Cu in CH2Cl2, CHCl3, or trichloroethane or (ii) treatment with lower-valent Ti prepd. from TiCl4 and Zn or Zn-Cu in dioxane or I. TiCl4 was treated with Zn powders in THF-CH2Cl2 mixt. at room temp. for 1 h and treated with (S)-N-(benzyloxycarbonyl)phenylalaninal at room temp. for 15 h to give 45% (2S,3R,4R,5S)-N,N'-bis(benzyloxycarbonyl)-2,5-diamino-1,6-diphenylhexane-3,4-diol, vs. 22%, when performed similarly, but without using CH2Cl2. | | | | |
| ST | threo isomer aminoalc prepn; aminoalc prepn intermediate treatment AIDS; human immunodeficiency virus protease inhibitor; titanium catalyst reductive coupling aminoaldehyde; solvent chloromethane chloroethane redn chlorotitanium; dioxane methoxyethane solvent redn zinc | | | | |
| IT | Virucides and Virustats (prepn. of threo-aminoalcs. as intermediates for HIV protease inhibitors by reductive homocoupling of .alpha.-aminoaldehydes) | | | | |
| IT | Acquired immune deficiency syndrome (treatment of; prepn. of threo-aminoalcs. as intermediates for HIV protease inhibitors by reductive homocoupling of .alpha.-aminoaldehydes) | | | | |
| IT | Aldehydes, reactions RL: RCT (Reactant); RACT (Reactant or reagent) (amino, prepn. of threo-aminoalcs. as intermediates for HIV protease inhibitors by reductive homocoupling of .alpha.-aminoaldehydes) | | | | |
| IT | Virus, animal (human immunodeficiency 1, prepn. of threo-aminoalcs. as intermediates for HIV protease inhibitors by reductive homocoupling of .alpha.-aminoaldehydes) | | | | |
| IT | Coupling reaction catalysts Dimerization catalysts (reductive, lower-valent Ti; prepn. of threo-aminoalcs. as intermediates for HIV protease inhibitors by reductive homocoupling of .alpha.-aminoaldehydes) | | | | |
| IT | 67-66-3, Chloroform, uses 75-09-2, Methylene chloride, uses 110-71-4, 1,2-Dimethoxyethane 123-91-1, Dioxane, uses 25323-89-1, | | | | |

Trichloroethane

RL: NUU (Other use, unclassified); USES (Uses)
(in prepn. of threo-aminoalcs. as intermediates for HIV
protease inhibitors by reductive homocoupling of .alpha.-
aminoaldehydes)

IT 109-99-9D, complex with titanium tetrachloride 110-71-4D,
1,2-Dimethoxyethane, complex with titanium tetrachloride 123-91-1D,
Dioxane, complex with titanium tetrachloride 7440-50-8, Copper,
reactions 7440-66-6, Zinc, reactions 7550-45-0,
Titanium tetrachloride, reactions 7550-45-0D, Titanium tetrachloride,
complexes

RL: RCT (Reactant); RACT (Reactant or reagent)
(in prepn. of threo-aminoalcs. as intermediates for HIV
protease inhibitors by reductive homocoupling of .alpha.-
aminoaldehydes)

IT 144114-21-6, Retropepsin

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(prepn. of threo-aminoalcs. as intermediates for HIV protease
inhibitors by reductive homocoupling of .alpha.-aminoaldehydes)

IT 137649-69-5P 153223-10-0P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
(Preparation)

(prepn. of threo-aminoalcs. as intermediates for HIV protease
inhibitors by reductive homocoupling of .alpha.-aminoaldehydes)

IT 59830-60-3 63219-70-5

RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of threo-aminoalcs. as intermediates for HIV protease
inhibitors by reductive homocoupling of .alpha.-aminoaldehydes)

IT 7440-50-8, Copper, reactions 7440-66-6, Zinc,
reactions

RL: RCT (Reactant); RACT (Reactant or reagent)
(in prepn. of threo-aminoalcs. as intermediates for HIV
protease inhibitors by reductive homocoupling of .alpha.-
aminoaldehydes)

RN 7440-50-8 HCAPLUS

CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS

CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L78 ANSWER 10 OF 24 HCAPLUS COPYRIGHT 2003 ACS

AN 1994:655644 HCAPLUS

DN 121:255644

TI Indole derivatives as inhibitors of HIV reverse transcriptase

IN Williams, Theresa M.; Ciccarone, Terrence M.; Saari, Walfred S.; Wai, John
S.; Greenlee, William J.; Balani, Suresh K.; Goldman, Mark E.; Hoffman,
Jacob M., Jr.; Lumma, William C., Jr.; et al.

PA Merck and Co., Inc., USA; Theoharides, Sharon, A.

SO PCT Int. Appl., 144 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07D209-30

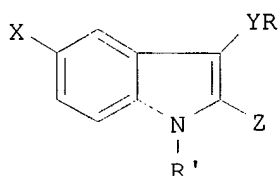
ICS A61K031-40

CC 27-11 (Heterocyclic Compounds (One Hetero Atom))

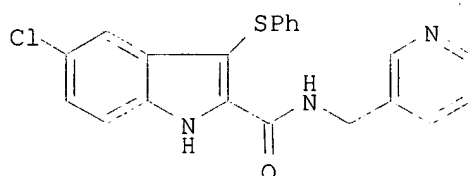
Section cross-reference(s): 1, 63

FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------------------------------------------------------------------------------------------------------------------|------|--------------|-----------------|--------------|
| PI | WO 9419321 | A1 | 19940901 | WO 1994-US1694 | 19940215 <-- |
| | W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KR, KZ, LK, LV, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, UZ | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| | CA 2156420 | AA | 19940901 | CA 1994-2156420 | 19940215 <-- |
| | AU 9462542 | A1 | 19940914 | AU 1994-62542 | 19940215 <-- |
| | BR 9405737 | A | 19951205 | BR 1994-5737 | 19940215 <-- |
| | EP 686148 | A1 | 19951213 | EP 1994-909663 | 19940215 <-- |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE | | | | |
| | CN 1119856 | A | 19960403 | CN 1994-191586 | 19940215 <-- |
| | JP 08507067 | T2 | 19960730 | JP 1994-519119 | 19940215 <-- |
| | HU 74614 | A2 | 19970128 | HU 1995-2468 | 19940215 <-- |
| | PL 175788 | B1 | 19990226 | PL 1994-310410 | 19940215 <-- |
| | US 5527819 | A | 19960618 | US 1995-488957 | 19950607 <-- |
| | FI 9503954 | A | 19950823 | FI 1995-3954 | 19950823 <-- |
| | NO 9503308 | A | 19951024 | NO 1995-3308 | 19950823 <-- |
| PRAI | US 1993-21925 | | 19930224 <-- | | |
| | US 1991-756013 | | 19910906 <-- | | |
| | US 1992-832260 | | 19920207 <-- | | |
| | US 1992-866765 | | 19920409 <-- | | |
| | WO 1994-US1694 | | 19940215 <-- | | |
| | US 1994-274101 | | 19940711 <-- | | |
| OS | MARPAT 121:255644 | | | | |
| GI | | | | | |



I



II

AB Novel indole compds. inhibit **HIV** reverse transcriptase (**HIV** RTR), and are useful in the prevention or treatment of infection by **HIV** and in the treatment of **AIDS**. The described compds. include I [X = H, Cl, F, Br, NO₂, cyano, OH, alkoxy, (di)(alkyl)amino, alkylamido, alkylsulfonamido; Y = S, SO, SO₂, O; R = (un)substituted alkyl, aryl, heterocyclyl, dialkylamino (except when Y = O); Z = (un)substituted CONH₂, CSNH₂, alkanoyl, alkoxycarbonyl, aminomethyl, cyano, etc.; R' = H, CHO, acyl, (un)substituted CONH₂] and their salts and esters. Approx. 180 I are prepd., listed, and/or claimed. For example, 5-chloroindole-2-carboxylic acid was treated with excess NaH in DMF and then with PhSSPh to give its 3-(phenylthio) deriv., which was amidated with 3-(aminomethyl)pyridine using BOP reagent and Et₃N in DMF to give title compd. II, a preferred compd. I inhibited **HIV** RTR in vitro with IC₅₀ of 3-35 nM for the most preferred compds. I also inhibited viral spread of **HIV** in cell cultures, with 95% inhibitory concns. (CIC₉₅) of 3-400 nM for preferred compds.

ST indole prepn inhibitor **HIV** reverse transcriptase; antiviral indole prepn; **AIDS** treatment indole prepn

IT **Human immunodeficiency virus**
(infection, treatment; prepn. of indole derivs. as inhibitors of **HIV** reverse transcriptase)

IT **Antiviral agents**

(prepn. of indole derivs. as inhibitors of HIV reverse transcriptase)

IT AIDS (disease)

(treatment; prepn. of indole derivs. as inhibitors of HIV reverse transcriptase)

IT AIDS (disease)

(-related complex, treatment; prepn. of indole derivs. as inhibitors of HIV reverse transcriptase)

IT 79-37-8DP, Ethanediolyl dichloride, reaction products with indolecarboxylic acid derivs. 14204-24-1P 24621-70-3P, 1H-Indole-2-methanol 72716-86-0P 118427-38-6P 124312-73-8P 143232-22-8P 143232-23-9P 143232-24-0P 143232-25-1P 148900-64-5P 148900-65-6P 148900-66-7P 148900-68-9P 148900-69-0P 158561-62-7P 158561-63-8DP, dimeric acid chloride deriv. 158561-63-8P 158561-64-9P 158561-65-0P 158561-66-1P 158561-80-9P 158561-81-0P 158561-82-1P 158561-83-2P 158561-84-3P 158561-85-4P 158561-86-5P 158561-87-6P 158561-89-8DP, dimeric acid chloride deriv.

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; prepn. of indole derivs. as inhibitors of HIV reverse transcriptase)

IT 26868-66-6P 116757-24-5P 118427-37-5P 143246-73-5P 148472-83-7P 148473-16-9P 148473-17-0P 148473-18-1P 148473-19-2P 148473-20-5P 148473-23-8P 148473-24-9P 148885-71-6P 148885-73-8P 148885-74-9P 148899-62-1P 148899-63-2P 148899-64-3P 148899-65-4P 148899-66-5P 148899-67-6P 148899-68-7P 148899-69-8P 148899-70-1P 148899-71-2P 148899-72-3P 148899-73-4P 148899-76-7P 148899-77-8P 148899-78-9P 148899-79-0P 148899-80-3P 148899-81-4P 148899-82-5P 148899-83-6P 148899-84-7P 148899-85-8P 148899-86-9P 148899-87-0P 148899-88-1P 148899-89-2P 148899-90-5P 148899-91-6P 148899-92-7P 148899-93-8P 148899-94-9P 148899-95-0P 148899-96-1P 148899-97-2P 148899-98-3P 148899-99-4P 148900-00-9P 148900-01-0P 148900-02-1P 148900-03-2P 148900-04-3P 148900-05-4P 148900-06-5P 148900-07-6P 148900-08-7P 148900-09-8P 148900-10-1P 148900-11-2P 148900-12-3P 148900-13-4P 148900-15-6P 148900-16-7P 148900-17-8P 148900-18-9P 148900-19-0P 148900-21-4P 148900-22-5P 148900-23-6P 148900-24-7P 148900-25-8P 148900-26-9P 148900-27-0P 148900-28-1P 148900-29-2P 148900-30-5P 148900-31-6P 148900-33-8P 148900-34-9P 148900-35-0P 148900-36-1P 148900-37-2P 148900-38-3P 148900-39-4P 148900-40-7P 148900-41-8P 148900-42-9P 148900-43-0P 148900-44-1P 148900-45-2P 148900-46-3P 148900-47-4P 148900-48-5P 148900-49-6P 148900-50-9P 148900-51-0P 148900-52-1P 148900-53-2P 148900-54-3P 148900-55-4P 148900-56-5P 148900-57-6P 148900-58-7P 148900-59-8P 148900-60-1P 148900-61-2P 148900-62-3P 158560-96-4P 158560-97-5P 158560-98-6P 158560-99-7P 158561-00-3P 158561-01-4P 158561-02-5P 158561-03-6P 158561-04-7P 158561-05-8P 158561-06-9P 158561-07-0P 158561-08-1P 158561-09-2P 158561-10-5P 158561-11-6P 158561-12-7P 158561-13-8P 158561-14-9P 158561-15-0P 158561-16-1P 158561-17-2P 158561-18-3P 158561-19-4P 158561-20-7P 158561-21-8P 158561-22-9P 158561-23-0P 158561-24-1P 158561-25-2P 158561-26-3P 158561-27-4P 158561-28-5P 158561-29-6P 158561-30-9P 158561-31-0P 158561-32-1P 158561-33-2P 158561-34-3P 158561-35-4P 158561-36-5P 158561-37-6P 158561-38-7P 158561-39-8P 158561-40-1P 158561-41-2P 158561-45-6P 158561-46-7P 158561-47-8P 158561-48-9P 158561-49-0P 158561-59-2P 158561-60-5P 158561-61-6P 158561-69-4P 158561-70-7P 158561-71-8P 158561-72-9P 158561-73-0P 158561-74-1P 158561-75-2P 158561-76-3P 158561-77-4P 158561-78-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of indole derivs. as inhibitors of HIV reverse transcriptase)

IT 9068-38-6

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)
 (prepn. of indole derivs. as inhibitors of HIV reverse transcriptase)

IT 56366-45-1 56366-45-1D, reactant
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of indole derivs. as inhibitors of HIV reverse transcriptase)

IT 118427-37-5DP, imtermediate 148899-66-5DP, intermediate
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. of indole derivs. as inhibitors of HIV reverse transcriptase)

IT 51-45-6, 1H-Imidazole-4-ethanamine 62-53-3, Benzenamine 75-04-7, Ethanamine 98-88-4, Benzoyl chloride 100-46-9, Benzenemethanamine 100-59-4 100-61-8 103-71-9 108-98-5, Benzenethiol 109-85-3 124-63-0, Methanesulfonyl chloride 128-09-6 141-43-5 462-08-8, 3-Pyridinamine 488-93-7, 3-Furancarboxylic acid 530-62-1 617-89-0, 2-Furanmethanamine 644-42-8 765-30-0, Cyclopropanamine 882-33-7 1142-19-4 2127-03-9 2393-23-9 2516-47-4, Cyclopropanemethanamine 2645-22-9 2799-16-8 3731-52-0, 3-Pyridinemethanamine 3731-53-1, 4-Pyridinemethanamine 3770-50-1 3886-69-9 4597-87-9 4792-67-0 5036-48-6, 1H-Imidazole-1-propanamine 5071-96-5 6320-03-2 6638-79-5 6850-57-3 7664-41-7, Ammonia 10517-21-2 13258-63-4, 4-Pyridineethanamine 19742-92-8 20062-51-5 20362-54-3 20989-17-7 22600-77-7 24367-50-8 26177-43-5 33252-30-1 34231-22-6 61747-29-3 69385-30-4 73604-31-6 116757-25-6 137897-99-5 144900-57-2 158561-67-2 158561-88-7 158561-89-8 158561-90-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactant; prepn. of indole derivs. as inhibitors of HIV reverse transcriptase)

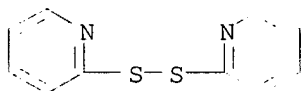
IT 158561-68-3DP, dimeric acid chloride deriv.
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (reactant; prepn. of indole derivs. as inhibitors of HIV reverse transcriptase)

IT 882-33-7 2127-03-9 2645-22-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactant; prepn. of indole derivs. as inhibitors of HIV reverse transcriptase)

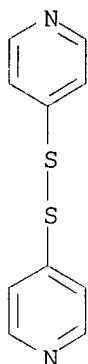
RN 882-33-7 HCAPLUS
 CN Disulfide, diphenyl (9CI) (CA INDEX NAME)

Ph-S-S-Ph

RN 2127-03-9 HCAPLUS
 CN Pyridine, 2,2'-dithiobis- (9CI) (CA INDEX NAME)



RN 2645-22-9 HCAPLUS
 CN Pyridine, 4,4'-dithiobis- (9CI) (CA INDEX NAME)



L78 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 2003 ACS

AN 1994:555749 HCAPLUS

DN 121:155749

TI Human immunodeficiency virus decoy

IN Kossovsky, Nir; Gelman, Andrew E.; Sponsler, Edward E.

PA Regents of the University of California, USA

SO U.S., 10 pp. Cont.-in-part of U.S. 5,178,882.

CODEN: USXXAM

DT Patent

LA English

IC ICM A61K009-14

ICS A61K039-12

NCL 424494000

CC 15-2 (Immunochemistry)

FAN.CNT 10

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|----------------------------------------------------------------------------------------------------------------------------|------|----------|-----------------|--------------|
| PI | US 5334394 | A | 19940802 | US 1993-199 | 19930104 <-- |
| | US 5219577 | A | 19930615 | US 1990-542255 | 19900622 <-- |
| | US 5178882 | A | 19930112 | US 1991-690601 | 19910424 <-- |
| | CA 2045204 | AA | 19911223 | CA 1991-2045204 | 19910621 <-- |
| | CA 2045204 | C | 19990105 | | |
| | AU 9179210 | A1 | 19920102 | AU 1991-79210 | 19910621 <-- |
| | AU 638841 | B2 | 19930708 | | |
| | JP 05255111 | A2 | 19931005 | JP 1991-178805 | 19910624 <-- |
| | JP 2932406 | B2 | 19990809 | | |
| | ES 2055539 | T3 | 19940816 | ES 1991-305706 | 19910624 <-- |
| | US 5306508 | A | 19940426 | US 1993-29773 | 19930311 <-- |
| | US 5441739 | A | 19950815 | US 1993-29896 | 19930311 <-- |
| | US 5460830 | A | 19951024 | US 1993-145870 | 19931101 <-- |
| | US 5462751 | A | 19951031 | US 1993-146536 | 19931101 <-- |
| | US 5460831 | A | 19951024 | US 1993-147751 | 19931104 <-- |
| | WO 9415586 | A1 | 19940721 | WO 1993-US10963 | 19931112 <-- |
| | W: AU, BB, BG, BR, BY, CA, CZ, FI, HU, JP, KP, KR, KZ, LK, LV, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, VN | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| | WO 9415581 | A1 | 19940721 | WO 1993-US10900 | 19931112 <-- |
| | W: AU, BB, BG, BR, BY, CA, CZ, FI, HU, JP, KP, KR, KZ, LK, LV, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, VN | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| | WO 9415585 | A1 | 19940721 | WO 1993-US10901 | 19931112 <-- |
| | W: AU, BB, BG, BR, BY, CA, CZ, FI, HU, JP, KP, KR, KZ, LK, LV, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, VN | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, | | | | |

BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

| | | | | | |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|----------|-----|
| CA 2152490 | AA | 19940721 | CA 1993-2152490 | 19931112 | <-- |
| CA 2152379 | AA | 19940721 | CA 1993-2152379 | 19931112 | <-- |
| AU 9469554 | A1 | 19940815 | AU 1994-69554 | 19931112 | <-- |
| AU 9456009 | A1 | 19940815 | AU 1994-56009 | 19931112 | <-- |
| AU 9457266 | A1 | 19940815 | AU 1994-57266 | 19931112 | <-- |
| EP 676955 | A1 | 19951018 | EP 1994-903257 | 19931112 | <-- |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | | | |
| EP 676954 | A1 | 19951018 | EP 1994-903252 | 19931112 | <-- |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | | | |
| EP 689421 | A1 | 19960103 | EP 1994-901411 | 19931112 | <-- |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | | | |
| JP 09504265 | T2 | 19970428 | JP 1993-515972 | 19931112 | <-- |
| JP 2875629 | B2 | 19990331 | | | |
| CA 2153147 | AA | 19990316 | CA 1993-2153147 | 19931112 | <-- |
| US 5462750 | A | 19951031 | US 1994-225100 | 19940408 | <-- |
| US 5464634 | A | 19951107 | US 1994-232756 | 19940425 | <-- |
| US 5639505 | A | 19970617 | US 1995-448042 | 19950523 | <-- |
| PRAI US 1990-542255 | | 19900622 | <-- | | |
| US 1991-690601 | | 19910424 | <-- | | |
| US 1993-199 | | 19930104 | <-- | | |
| US 1993-986 | | 19930106 | <-- | | |
| US 1993-29773 | | 19930311 | <-- | | |
| US 1993-29896 | | 19930311 | <-- | | |
| WO 1993-US10900 | | 19931112 | <-- | | |
| WO 1993-US10901 | | 19931112 | <-- | | |
| WO 1993-US10963 | | 19931112 | <-- | | |
| AB | An antigenically active compn. is made up of core particles (e.g. of Sn, Ru, or Si oxide) having diams. <1000 nm which are coated with a layer (e.g. of carbohydrate) designed to allow attachment of biol. active proteins, peptides, or pharmacol. agents to the microparticles. When HIV protein was attached to cellobiose-coated diamond nanocryst. core particles, the result was a virus decoy which accurately mimicked native HIV in size, structure, and surface character while being entirely devoid of virulent activity due to the microparticle core. The HIV decoy is useful as a vaccine for treating mammals to elicit an immune response. | | | | |
| ST | virus antigen oxide particle vaccine | | | | |
| IT | Transferrins | | | | |
| | RL: PEP (Physical, engineering or chemical process); PROC (Process) (adsorption of, on cellobiose-coated tin oxide particles) | | | | |
| IT | Particles | | | | |
| | (carbohydrate-coated, viral antigen bound to, as vaccine) | | | | |
| IT | Vaccines | | | | |
| | (for HIV , antigen bound to carbohydrate-coated particles as) | | | | |
| IT | Adsorption | | | | |
| | (of antigens, on carbohydrate-coated particles) | | | | |
| IT | Carbohydrates and Sugars, biological studies | | | | |
| | RL: BIOL (Biological study) | | | | |
| | (particles coated with, viral antigen bound to, as vaccine) | | | | |
| IT | Ceramic materials and wares | | | | |
| | Metals, biological studies | | | | |
| | Polymers, biological studies | | | | |
| | RL: BIOL (Biological study) | | | | |
| | (particles, carbohydrate-coated, viral antigen bound to, as vaccine) | | | | |
| IT | Virus, animal | | | | |
| | (Epstein-Barr, adsorption of, on cellobiose-coated tin oxide particles, for vaccine) | | | | |
| IT | Glycoproteins, specific or class | | | | |
| | RL: BIOL (Biological study) | | | | |
| | (gp120, of HIV , bound to carbohydrate-coated particles, as vaccine) | | | | |
| IT | Glycoproteins, specific or class | | | | |

RL: BIOL (Biological study)
 (gp160, of HIV, bound to carbohydrate-coated particles, as vaccine)

IT Glycoproteins, specific or class
 RL: BIOL (Biological study)
 (gp41, of HIV, bound to carbohydrate-coated particles, as vaccine)

IT **Virus, animal**
 (human immunodeficiency, vaccine for, antigen bound to carbohydrate-coated particles as)

IT 69-79-4, Maltose 99-20-7, Trehalose 499-40-1, Isomaltose 528-50-7, Cellobiose 1109-28-0, Maltotriose 9004-70-0, Nitrocellulose 13133-07-8, Nystose
 RL: BIOL (Biological study)
 (particles coated with, viral antigen bound to, as vaccine)

IT 1332-29-2, Tin oxide 1344-28-1, Aluminum oxide, biological studies 7439-89-6, Iron, biological studies 7440-02-0, Nickel, biological studies 7440-06-4, Platinum, biological studies 7440-22-4, Silver, biological studies 7440-44-0, Carbon, biological studies 7440-47-3, Chromium, biological studies 7440-57-5, Gold, biological studies 7440-66-6, Zinc, biological studies 7631-86-9, Silicon dioxide, biological studies 7782-40-3, Diamond, biological studies 7782-49-2, Selenium, biological studies 11113-84-1, Ruthenium oxide
 RL: BIOL (Biological study)
 (particles, carbohydrate-coated, viral antigen bound to, as vaccine)

IT 7439-89-6, Iron, biological studies 7440-66-6, Zinc, biological studies
 RL: BIOL (Biological study)
 (particles, carbohydrate-coated, viral antigen bound to, as vaccine)

RN 7439-89-6 HCAPLUS
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7440-66-6 HCAPLUS
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L78 ANSWER 12 OF 24 HCAPLUS . COPYRIGHT 2003 ACS
 AN 1994:525213 HCAPLUS
 DN 121:125213
 TI Synergism of metal ions and polyanions in prevention of HIV infections
 IN Kuemel, Gunther
 PA Germany
 SO Ger., 12 pp.
 CODEN: GWXXAW
 DT Patent
 LA German
 IC ICM A61K033-24
 ICS A61K031-725; A61K033-30; A61K033-34; A61K033-38
 CC 1-5 (Pharmacology)
 Section cross-reference(s): 10
 FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|-------|-----------------|-------|
| ----- | ---- | ----- | ----- | ----- |

PI DE 4302053 C1 19940630 DE 1993-4302053 19930126 <--
 PRAI DE 1993-4302053 19930126 <--
 AB Pharmaceutical compns. for prophylaxis of **HIV** infections contain
 Zr, Rh, Pd, Au, **Zn**, Cu, and/or Ag ions or compds. which release
 these ions in synergistic combination with a polyanion [e.g. dextran
 sulfate, heparin (derivs.), acrylate polymers, poly(galacturonic acid)
 derivs.] which prevents the adsorption of free **HIV** onto host
 cells. The metal ions bind irreversibly to the viral surface proteins and
inactivate the virus. Thus, replication of **HIV-1** in
 MOLT-4 cells was almost completely inhibited by initial
inactivation of the virus with 200 .mu.M Ag+ for 20 min, followed
 by exposure of cells to the virus in the presence of Cetomacrogol
 (adsorption inhibitor) for 3 days.
 ST **HIV** inhibitor metal polyanion synergism
 IT Lymphocyte
 (HIV adsorption to, metal ions and polyanions inhibition of)
 IT Cations
 (HIV inactivation with)
 IT **Virucides and Virustats**
 (metal ions, for **HIV**, polyanions synergism with)
 IT Adsorption
 (of **HIV**, on lymphocyte, metal ions and polyanions inhibition
 of)
 IT Alcohols, biological studies
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (C16-18, ethoxylated, **HIV** infection prevention with metal
 ions and polyanions and)
 IT Polyelectrolytes
 (anionic, **HIV** infection prevention with metal ions and)
 IT **Virus, animal**
 (human immunodeficiency, infection with, prevention
 of, with metal and polyanion)
 IT **Virus, animal**
 (human immunodeficiency 1, infection
 with, prevention of, with metal and polyanion)
 IT Detergents
 (nonionic, **HIV** infection prevention with metal ions and
 polyanions and)
 IT 7440-05-3, Palladium, biological studies 7440-16-6, Rhodium, biological
 studies 7440-22-4, Silver, biological studies **7440-50-8**,
 Copper, biological studies 7440-57-5, Gold, biological studies
7440-66-6, **Zinc**, biological studies 7440-67-7,
 Zirconium, biological studies 7733-02-0, **Zinc** sulfate
 7758-98-7, Copper sulfate, biological studies 7761-88-8, Silver nitrate,
 biological studies
 RL: BIOL (Biological study)
 (HIV inactivation with, synergism with polyanions
 in relation to)
 IT 79-10-7D, 2-Propenoic acid, polymers 9005-49-6, Heparin, biological
 studies 9005-49-6D, Heparin, derivs. 9042-14-2, Dextran sulfate
 25249-06-3D, Poly(galacturonic acid), derivs.
 RL: BIOL (Biological study)
 (HIV infection prevention with metal ions and)
 IT **7440-50-8**, Copper, biological studies **7440-66-6**,
Zinc, biological studies
 RL: BIOL (Biological study)
 (HIV inactivation with, synergism with polyanions
 in relation to)
 RN 7440-50-8 HCAPLUS
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L78 ANSWER 13 OF 24 HCAPLUS COPYRIGHT 2003 ACS
 AN 1994:499775 HCAPLUS
 DN 121:99775
 TI Adenosine diphosphoribose polymerase-binding nitroso aromatic compounds
 useful as anti-retroviral agents and anti-tumor agents
 IN Kun, Ernest; Mendeleyev, Jerome; Rice, William C.
 PA Octamer, Inc., USA; Emory University
 SO PCT Int. Appl., 106 pp.
 CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K031-37

ICS A61K031-165; A61K031-47

CC 1-5 (Pharmacology)

Section cross-reference(s): 27

FAN.CNT 9

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-----------------------------------------------------------------------|------|----------|-----------------|--------------|
| PI | WO 9409776 | A1 | 19940511 | WO 1993-US9457 | 19931004 <-- |
| | W: AU, CA, JP | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | US 5516941 | A | 19960514 | US 1992-965541 | 19921102 <-- |
| | AU 9352986 | A1 | 19940524 | AU 1993-52986 | 19931004 <-- |
| | EP 666742 | A1 | 19950816 | EP 1993-923226 | 19931004 <-- |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | | |
| | JP 10504517 | T2 | 19980506 | JP 1993-511074 | 19931004 <-- |
| PRAI | US 1992-965541 | A | 19921102 | <-- | |
| | US 1993-87566 | A | 19930702 | <-- | |
| | US 1991-780809 | A2 | 19911022 | <-- | |
| | US 1992-893429 | B2 | 19920604 | <-- | |
| | WO 1993-US9457 | W | 19931004 | <-- | |

AB Benzopyrone, benzamide, and isoquinolinone nitroso derivs. are prepd.
 which **inactivate** viruses having a **Zn finger**

nucleocapsid protein and are useful for treating viral infections
 and cancer. Thus, 1(2H)-isoquinolinone was nitrated to a mixt. of the 5-
 and 7-nitro isomers; the mixt. was reduced to the amino derivs. with KBH4
 and Pd/C and oxidized to the nitroso derivs. with 3-chloroperoxybenzoic
 acid, and the isomers were sepd. by TLC. The isomer mixt. almost
 completely inhibited thymidine-3H uptake by human leukemia cells at 10
 .mu.M, and inhibited the polymerase activity of ADP-ribosyltransferase
 with an IC50 of 13 .mu.M. 3-Nitrosobenzamide (3 or 6 mM) caused loss of
 50-83% of the viral **Zn** from **HIV-1** with complete loss
 of infectivity, and caused disocn. of the complex of **HIV-1**
 nucleic acid with the **Zn finger** of viral protein Fl.

ST retrovirus inhibition nitroso arom compd; neoplasm inhibition nitroso arom
 compd; ADP ribose polymerase inhibition nitroso compd; virucide benzamide
 benzopyran isoquinolinone nitroso

IT Neoplasm inhibitors

Virucides and Virustats

(nitroso arom. compds.)

IT Aromatic compounds

RL: BIOL (Biological study)
(nitroso, neoplasm and retrovirus inhibition by)

IT Blood
(retrovirus **inactivation** in, by nitroso arom. compds.)

IT Proteins, specific or class
RL: BIOL (Biological study)
(Fl, of **HIV-1**, dissocn. of **zinc finger**
of, from **HIV-1** RNA, nitroso arom. compds. effect on)

IT Nitroso compounds
RL: BIOL (Biological study)
(aryl, neoplasm and retrovirus inhibition by)

IT **Virus, animal**
(**human immunodeficiency**, infection with, treatment
of, with nitroso org. compds.)

IT **Virus, animal**
(**human immunodeficiency 1**, infection
with, treatment of, with nitroso org. compds.)

IT Virion structure
(**nucleocapsid**, **zinc finger**-contg. protein
of, **inactivation** of, by nitroso arom. compds.)

IT **Virus, animal**
(**retro-**, **inactivation** of, by nitroso arom. compds.)

IT **Virus, animal**
(**simian immunodeficiency**, **inactivation**
of, by nitroso arom. compds.)

IT Conformation and Conformers
(**zinc-finger** motif, of protein Fl, of **HIV**
-1, nitroso arom. compds. effect on, RNA binding in relation to)

IT 14415-44-2, 6-Amino-1,2-benzopyrone 137881-27-7,
5-Iodo-6-amino-1,2-benzopyrone 142404-02-2
RL: BIOL (Biological study)
(ADP-ribosyltransferase inhibition by)

IT 2725-81-7
RL: PRP (Properties)
(cytotoxicity of, to granulocyte-macrophage stem cells of human)

IT 9055-67-8
RL: PROC (Process)
(**inactivation** of, by nitroso arom. compds.)

IT 156730-40-4 156730-42-6
RL: BIOL (Biological study)
(neoplasm and retrovirus inhibition by)

IT 491-30-5, 1(2H)-Isoquinolinone
RL: RCT (Reactant); RACT (Reactant or reagent)
(nitration of)

IT 3544-24-9, 3-Aminobenzamide
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidn. of, with chloroperoxybenzoate)

IT 63989-79-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidn. of, with peroxide)

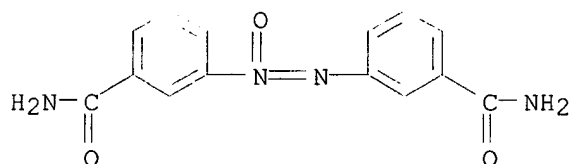
IT **156730-41-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

IT 130506-22-8P, 6-Nitroso-1,2-benzopyrone 144189-66-2P, 3-Nitrosobenzamide
149095-76-1P 149095-77-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of and neoplasm and retrovirus inhibition by)

IT **7440-66-6, Zinc**, biological studies
RL: BIOL (Biological study)
(release of, by **HIV-1**, nitroso arom. compds. effect on)

IT **156730-41-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

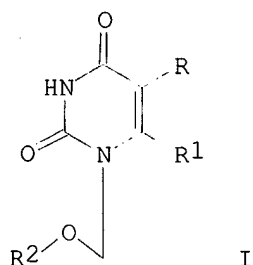
RN 156730-41-5 HCAPLUS
 CN Benzamide, 3,3'-azoxybis- (9CI) (CA INDEX NAME)



IT 7440-66-6, Zinc, biological studies
 RL: BIOL (Biological study)
 (release of, by HIV-1, nitroso arom. compds. effect on)
 RN 7440-66-6 HCAPLUS
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L78 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 2003 ACS
 AN 1994:457858 HCAPLUS
 DN 121:57858
 TI Synthesis and anti-HIV-1 activities of 6-arylthio and
 6-arylselenoacyclonucleosides
 AU Pan, Bai Chuan; Chen, Zhi Hao; Piras, Giovanna; Dutschman, Ginger E.;
 Rowe, Elizabeth C.; Cheng, Yung Chi; Chu, Shih Hsi
 CS Div. Biol. Med., Brown Univ., Providence, RI, 02912, USA
 SO Journal of Heterocyclic Chemistry (1994), 31(1), 177-85
 CODEN: JHTCAD; ISSN: 0022-152X
 DT Journal
 LA English
 CC 33-9 (Carbohydrates)
 Section cross-reference(s): 1
 GI



AB 6-Arylthio and 6-arylselenoacyclonucleosides were synthesized and tested for the ability to inhibit replication of HIV-1. Lithiation of acyclonucleosides with LDA followed by reaction with the electrophiles Ph disulfide, di-Ph diselenide, 2,2'-dipyridyl disulfide or 2,2'-dipyridyl diselenide afforded acyclonucleosides I [R = H, Me, Et; R1 = SePh, 2-pyridylthio, 2-pyridylseleno; R2 = CH2Ph, cyclohexylmethyl, CHPhOH]. I [R2 = CHPhOH] were obtained by deprotection of I [R2 = CHPhOSiMe2CMe3]. Dehydrated products I [R2 = CPh:CH2] were

also formed during the reactions. I [R = Et, R1 = 2-pyridylthio, 2-pyridylseleno, R2 = CH2Ph] were more active against HIV-1 in both MT-2 and CEM-IW cell lines than AZT, DDC, DDI or D4T. The EC50 of I [R = Et, R1 = 2-pyridylthio, R2 = CH2Ph] against HIV-1 in CEM-IV cell was in the nanomolar range with a therapeutic index of 1100.

ST acyclonucleoside arylthio arylseleno; arylthioacyclonucleoside prepn virucide; arylselenoacyclonucleoside prepn virucide; pyridylselenoacyclonucleoside prepn virucide; pyridylthioacyclonucleoside prepn virucide; HIV inhibitor acyclonucleoside

IT **Virucides and Virustats**

(arylthio- and arylselenoacyclonucleosides)

IT **Virus, animal**

(human immunodeficiency 1, inhibitors, arylthio- and arylselenoacyclonucleosides)

IT 155831-58-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(9repn. and reaction of, in prepn. of arylthio- and arylselenoacyclonucleosides)

IT 7288-28-0P 10457-14-4P 31167-05-2P 133684-90-9P 155831-56-4P
155831-57-5P 155831-59-7P 155831-60-0P 155831-61-1P 155831-62-2P
155831-63-3P 155831-64-4P 155831-65-5P 155831-66-6P 155831-68-8P
155831-69-9P 155831-70-2P 156192-65-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and reaction of, in prepn. of arylthio- and arylselenoacyclonucleosides)

IT 153562-59-5P 153562-60-8P 155831-51-9P 155831-52-0P 155831-53-1P
155831-55-3P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(prepn. and virucidal activity of)

IT 155831-67-7P 155831-71-3P 155831-72-4P 155831-73-5P 155831-74-6P
155831-75-7P 155831-76-8P 155831-77-9P 155831-78-0P 155831-79-1P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

IT 66-22-8, Uracil, reactions 10335-95-2 80140-15-4 80140-17-6
153562-61-9 155831-54-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, in prepn. of arylthio- and arylselenoacyclonucleosides)

L78 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 2003 ACS

AN 1994:217722 HCAPLUS

DN 120:217722

TI Preparation of 6-pyridyl substituted pyrimidine derivatives and their use as antiviral agents

IN Chu, Shih Hsi; Cheng, Yung Chi; Pan, Bai Chuan

PA Brown University Research Foundation, USA

SO PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07D401-12

ICS A61K031-505

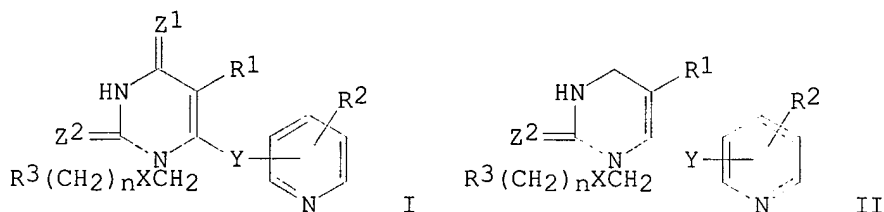
CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 1

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|--------------------------------------------------------------------|------|----------|-----------------|--------------|
| PI | WO 9323390 | A1 | 19931125 | WO 1993-US4134 | 19930503 <-- |
| | W: AU, CA, JP, KR | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | US 5278167 | A | 19940111 | US 1992-882584 | 19920513 <-- |

AU 9342289 A1 19931213 AU 1993-42289 19930503 <--
 PRAI US 1992-882584 19920513 <--
 WO 1993-US4134 19930503 <--
 OS MARPAT 120:217722
 GI



AB Title compds. I, II (R1 = H, halo, alkyl, alkenyl, alkynyl, F3C, PhS, pyridylthio; R2 = H, halo, alkyl, H2N, (mono-, disubstituted) amino, azidoalkyl, aminoalkyl (substituted) aminoalkyl; R3 = H, halo, alkyl, (substituted) aryl, azidoalkyl, (substituted) aminoalkyl, F3C, pyridyl, quinolyl; X = S, O; Y = S, Se; n = 0-5; Z1, Z2 = O, S, Se) are prepd. 2,4-Bis-O-(trimethylsilyl)-5-ethyluracil (prepn. given) was converted to 5-ethyl-1-(benzyloxymethyl)uracil which was treated with dipyridyl disulfide to give I (R1 = Et, R2 = H, R3 = Ph, X = O, Y = S .mu. = 1, Z1 = Z2 = o) (III). In test against HIV the EC50, TI50 (therapeutic index) IC50 (toxic concn.) were 9.00 .times. 10-10, >1.10 .times. 10+3 and >9.8 .times. 10-7M, resp. III increased the efficacy of known 5-Fura against human cancer cell lines.

ST pyrimidinedione pyridyl prepn HIV inhibitor; uracil pyridyl prepn HIV inhibitor; neoplasm inhibitor enhancement pyridyluracil

IT **Virucides and Virustats**
 (HIV, pyridylthio- or selenyluracils)

IT Neoplasm inhibitors
 (enhancement of, pyridylthio- or selenyluracils for)

IT **Virus, animal**
 (human immunodeficiency 1, infection of, treatment of, pyridylthio- and selenyluracils for)

IT 2044-26-0P, 2(1H)-Pyridineselone 31167-05-2P 59957-75-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and reaction of, in prepn. of antiviral agents)

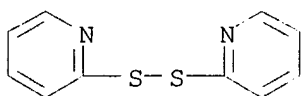
IT 153562-59-5P 153562-60-8P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (prepn. of, as antiviral agent)

IT 100-51-6, Benzyl alcohol, reactions 109-04-6, 2-Bromopyridine
 2127-03-9 30525-89-4, Paraformaldehyde 153562-61-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, in prepn. of antiviral agents)

IT 2127-03-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, in prepn. of antiviral agents)

RN 2127-03-9 HCAPLUS

CN Pyridine, 2,2'-dithiobis- (9CI) (CA INDEX NAME)



L78 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 2003 ACS

AN 1994:30786 HCAPLUS

DN 120:30786

TI Linked heterocyclic polyamines with activity against HIV

IN Bridger, Gary James; Padmanabhan, Sreenivasan; Skerlj, Renato Tony; Thornton, David Michael

PA Johnson Matthey P.L.C., UK

SO PCT Int. Appl., 66 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07D257-02

ICS C07D255-02; C07D259-00; C07D401-14; C07D409-14

CC 28-23 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 1

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
|------|-----------------------------------------------------------------------|------|----------|-----------------|----------|-----|
| PI | WO 9312096 | A1 | 19930624 | WO 1992-GB2334 | 19921216 | <-- |
| | W: AU, CA, CS, FI, HU, JP, KR, NO, NZ, PL, RU, US | | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | | |
| | IL 103984 | A1 | 19981030 | IL 1992-103984 | 19921204 | <-- |
| | ZA 9209632 | A | 19930618 | ZA 1992-9632 | 19921211 | <-- |
| | AU 9331655 | A1 | 19930719 | AU 1993-31655 | 19921216 | <-- |
| | AU 661086 | B2 | 19950713 | | | |
| | EP 619813 | A1 | 19941019 | EP 1993-900285 | 19921216 | <-- |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | | | |
| | JP 07501816 | T2 | 19950223 | JP 1992-510745 | 19921216 | <-- |
| | HU 67544 | A2 | 19950428 | HU 1994-1786 | 19921216 | <-- |
| | PL 173643 | B1 | 19980430 | PL 1992-304125 | 19921216 | <-- |
| | CZ 286928 | B6 | 20000816 | CZ 1994-1188 | 19921216 | <-- |
| | EP 1223166 | A1 | 20020717 | EP 2002-1112 | 19921216 | <-- |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE | | | | | |
| | FI 9402849 | A | 19940615 | FI 1994-2849 | 19940615 | <-- |
| | NO 9402254 | A | 19940615 | NO 1994-2254 | 19940615 | <-- |
| | US 5583131 | A | 19961210 | US 1994-244863 | 19940818 | <-- |
| PRAI | GB 1991-26677 | A | 19911216 | | | <-- |
| | CS 1994-1188 | A | 19921216 | | | <-- |
| | EP 1993-900285 | A3 | 19921216 | | | <-- |
| | WO 1992-GB2334 | A | 19921216 | | | <-- |

OS MARPAT 120:30786

AB The title compds. ZRARLY [A = arom. or heteroarom. moiety; R, R1 = (un)substituted alk. chain or heteroatom-contg. chain; Y, Z = cyclic polyamine moieties having 9-32 ring members and 3-8 N atoms in the ring spaced by .gtoreq.2 C atoms from each other] or their acid addn. salts or metal complexes are prepd. and demonstrated viricidal activity against HIV-1 and HIV-2. Thus, 1,1'-[1,4-phenylenebis(methylene)]bis-1,4,8,11-tetraazacyclotetradecane was prepd. and demonstrated 50% inhibitory concn. against HIV-1 of 0.006 .mu.g/mL and 50% inhibitory concn. against HIV-2 of <0.01 .mu.g/mL in an assay employing infected MT-4 cells.

ST AIDS treatment prepn heterocyclic polyamine; HIV virucide prepn heterocyclic polyamine; tetraazacyclotetradecane prepn HIV viricidal agent; virustat prepn tetraazacyclotetradecane

IT Virucides and Virustats

(heterocyclic polyamines)

IT **Virus, animal**
(human immunodeficiency 1, inhibition of, heterocyclic polyamines for)

IT **Virus, animal**
(human immunodeficiency 2, inhibition of, heterocyclic polyamines for)

IT 151191-32-1 151191-33-2 151191-34-3 151191-35-4 151191-36-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(HIV viricidal activity of)

IT **7440-50-8DP, Copper, 1,4-phenylenebismethylene bis tetraazacyclotetradecane complexes 7440-66-6DP, Zinc, 1,4-phenylenebismethylene bis tetraazacyclotetradecane complexes**
110078-44-9P 110078-46-1DP, copper and zinc complexes
133587-10-7P 133587-11-8P 151190-72-6P 151190-73-7P 151190-74-8P
151190-75-9P 151190-76-0P 151190-80-6P 151190-81-7P 151190-85-1P
151190-87-3P 151190-91-9P 151190-93-1P 151190-94-2P 151190-95-3P
151190-96-4P 151190-97-5P 151190-98-6P 151190-99-7P 151191-02-5P
151191-03-6P 151191-05-8P 151191-06-9P 151191-08-1P 151191-09-2P
151191-12-7P 151191-14-9P 151191-15-0P 151191-17-2P 151191-18-3P
151191-20-7P 151191-21-8P 151191-24-1P 151191-25-2P 151191-26-3P
151191-27-4P 151191-28-5P 151191-29-6P 151191-30-9P 151191-31-0P
151191-37-6P 151191-38-7P 151191-39-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and HIV viricidal activity of)

IT 19417-58-4P, 1,4-Benzenedipropanol 58791-49-4P 60023-32-7P
63134-93-0P 70364-29-3P 92339-07-6P 105355-16-6P 145617-64-7P
151190-69-1P 151190-70-4P 151190-71-5P 151190-77-1P 151190-79-3P
151190-82-8P 151190-83-9P 151190-84-0P 151190-86-2P 151190-88-4P
151190-89-5P 151190-92-0P 151191-00-3P 151191-01-4P 151191-04-7P
151191-07-0P 151191-10-5P 151191-11-6P 151191-13-8P 151191-16-1P
151191-19-4P 151191-22-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, in prepn. of heterocyclic HIV viricidal agents)

IT 575-41-7, 1,3-Dimethylnaphthalene 623-24-5, .alpha.,.alpha.'-Dibromo-p-xylene 623-27-8, 1,4-Benzenedicarboxaldehyde 626-15-3, .alpha.,.alpha.'-Dibromo-m-xylene 652-36-8 1099-45-2, Carbethoxymethylene)triphenylphosphorane 1198-37-4, 2,4-Dimethylquinoline 4741-99-5, 1,4,8,11-Tetraazaundecane 7703-74-4
14647-60-0 24656-53-9 28569-48-4 35991-75-4 39568-89-3
66977-70-6 71176-55-1 78831-37-5 94530-07-1 104395-69-9
110078-46-1 134457-14-0 151190-78-2 151191-23-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in prepn. of heterocyclic HIV viricidal agents)

IT **7440-50-8DP, Copper, 1,4-phenylenebismethylene bis tetraazacyclotetradecane complexes 7440-66-6DP, Zinc, 1,4-phenylenebismethylene bis tetraazacyclotetradecane complexes**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and HIV viricidal activity of)

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L78 ANSWER 17 OF 24 HCAPLUS COPYRIGHT 2003 ACS

AN 1993:463030 HCAPLUS

DN 119:63030

TI Complexes of DNA and metals as antiviral agents

IN Vainberg, Jury Petrovich; Kaplina, Elli Nikolaevna

PA Russia

SO PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DT Patent

LA Russian

IC ICM A61K031-70

ICS A61K009-08

CC 1-5 (Pharmacology)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|-----------------|--------------|
| PI | WO 9310793 | A1 | 19930610 | WO 1992-RU170 | 19920909 <-- |

W: CA, JP, US

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE

PRAI SU 1991-5015754 19911203 <--

AB Complexes of the sodium salt of DNA and polyvalent metals (Ni, Fe, Co, Mn, Mg, or Zn) are effective inhibitors of growth of a no. of animal DNA and RNA viruses. The ratio of DNA:metal in these complexes is in the range 10-1,000:0.5-3.0. Exposure of cultured HIV-infected cells to these complexes resulted in a drop in levels of antigen in a dose-dependent manner. The most effective complex was that with iron; at 1600 .mu.g/mL it was almost as effective as AZT at 500 .mu.g/mL. The complexes showed no cytotoxicity at 200 .mu.g/mL.

ST virucide DNA metal complex; HIV virucide DNA metal complex

IT **Virucides and Virustats**

(polyvalent metal complexes with DNA as)

IT Virus, animal

(carnivore plague, inhibitors for, polyvalent metal complexes with DNA as)

IT Deoxyribonucleic acids

RL: BIOL (Biological study)

(complexes, metal, as virucides)

IT Virus, animal

(herpes, inhibitors for, polyvalent metal complexes with DNA as)

IT **Virus, animal**

(human immunodeficiency 1, inhibitors

for, polyvalent metal complexes with DNA as)

IT Virus, animal

(influenza, inhibitors for, polyvalent metal complexes with DNA as)

IT Virus, animal

(orthomyxo-, inhibitors for, polyvalent metal complexes with DNA as)

IT Virus, animal

(paramyxo-, inhibitors for, polyvalent metal complexes with DNA as)

IT **Virus, animal**

(retro-, inhibitors for, polyvalent metal complexes with DNA as)

IT **7439-89-6D**, Iron, DNA complexes 7439-95-4D, Magnesium, DNA

complexes 7439-96-5D, Manganese, DNA complexes 7440-48-4D, Cobalt, DNA

complexes **7440-66-6D**, Zinc, DNA complexes

RL: BIOL (Biological study)

(as virucides)

IT **7439-89-6D**, Iron, DNA complexes **7440-66-6D**, Zinc
, DNA complexes

RL: BIOL (Biological study)
(as virucides)

RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L78 ANSWER 18 OF 24 HCAPLUS COPYRIGHT 2003 ACS
AN 1993:249284 HCAPLUS
DN 118:249284
TI Mixed ligand complexes for use as luminescence labels for detection and
photochemical cleavage of DNA
IN Barton, Jacqueline K.
PA Columbia University, USA
SO U.S., 87 pp. Cont.-in-part of U.S. 5,112,974.
CODEN: USXXAM

DT Patent
LA English
IC A61K031-555; C07F000-00
NCL 514185000
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 1, 78
FAN.CNT 3

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|--------------|
| PI | US 5157032 | A | 19921020 | US 1990-539930 | 19900618 <-- |
| | US 4721669 | A | 19880126 | US 1985-693023 | 19850118 <-- |
| | US 5112974 | A | 19920512 | US 1988-268247 | 19881107 <-- |
| | US 5439794 | A | 19950808 | US 1992-843315 | 19920228 <-- |
| | US 5225556 | A | 19930706 | US 1992-927865 | 19920810 <-- |
| PRAI | US 1985-693023 | | 19850118 | <-- | |
| | US 1986-905295 | | 19860908 | <-- | |
| | US 1988-268247 | | 19881107 | <-- | |
| | US 1990-621651 | | 19901203 | <-- | |

OS MARPAT 118:249284

AB Complexes M(R1)(R2)(R3) (M = transition metal, R1, R2, R3= ethylenediamine, bipyridine, phenanthroline, diazafluorene-9-one, phenanthrenequinonediimine, dipyridophenazine, or their substituted derivs.) are used as luminescence probes for detection of double-stranded DNA. These complexes show modified luminescence upon incorporation into a double-stranded DNA. These complexes can also be used to photochem. cleave DNA at a specific single-strand site and are useful as an anal. reagent and in the treatment of viral infections (e.g. with HIV). 9,10-Phenanthrenequinone bis((-trimethylsilyl)-imine) 1.025 g, synthesized from 9,10-phenanthrenequinone and Na bis(trimethylsilyl)amide, in benzene 75 mL was mixed with a suspension of Ru(DMSO)4Cl2 0.355 g in an EtOH/benzene mixt. and incubated at 65.degree. until Ru(phi)3Cl2 formed; the product was collected by pptn. with di-Et ether. A series of analogs were also prepd. and their binding to DNA detd. by equil. dialysis; the spectroscopic properties of the complexes with DNA were also detd. Binding of the complexes to DNA was shown to be by intercalation. Photochem. cleavage of DNA with these complexes was base neutral and very clean. The use of these reagents in the killing of HIV-infected

- T4 lymphocytes.
- ST complex mixed ligand DNA binding; photochem cleavage DNA transition metal complex
- IT **Virucides and Virustats**
(mixed ligand complexes of transition metals as, photochem. cleavage of DNA in relation to)
- IT Transition metals, uses
RL: USES (Uses)
(mixed ligand complexes of, as luminescence labels for DNA, photochem. cleavage in relation to)
- IT Photochemistry
(of DNA cleavage with luminescent transition metal mixed-ligand complexes)
- IT Deoxyribonucleic acids
RL: RCT (Reactant); RACT (Reactant or reagent)
(photochem. cleavage of, mixed ligand complexes of transition metals for)
- IT **Virus, animal**
(human immunodeficiency, infection by, treatment of, mixed-ligand complexes of transition metals for)
- IT Coordination compounds
RL: BIOL (Biological study)
(mixed-ligand, as luminescence labels for DNA, photochem. cleavage in relation to)
- IT 14323-06-9 22563-12-8 22563-13-9 22873-66-1 23570-43-6
23757-39-3 54360-17-7 60828-36-6 60828-37-7 63373-03-5
75777-88-7 77479-83-5 77744-84-4 92543-42-5 93503-36-7
120311-41-3 120311-42-4 120311-43-5 120331-85-3 132045-64-8
132045-65-9 132045-69-3 132069-13-7 132069-14-8 132069-15-9
147789-89-7 147789-90-0
RL: USES (Uses)
(binding to DNA and luminescence properties of, photochem. cleavage in relation to)
- IT 94552-81-5
RL: USES (Uses)
(for treatment of HIV infection)
- IT **7439-89-6DP**, Iron, mixed-ligand complexes 7440-05-3DP, Palladium, mixed-ligand complexes 7440-15-5DP, Rhenium, mixed-ligand complexes 7440-18-8DP, Ruthenium, mixed-ligand complexes 7440-43-9DP, Cadmium, mixed-ligand complexes 7440-47-3DP, Chromium, mixed-ligand complexes 7440-48-4DP, Cobalt, mixed-ligand complexes **7440-50-8DP**, Copper, mixed-ligand complexes **7440-66-6DP**, Zinc, mixed-ligand complexes
RL: PREP (Preparation)
(prepn. of, as luminescence labels for DNA, photochem. cleavage in relation to)
- IT 121174-89-8P
RL: PREP (Preparation)
(prepn. of, for binding and photochem. cleavage of DNA)
- IT 110528-02-4P 110528-03-5P 110528-05-7P
RL: PREP (Preparation)
(prepn. of, in prepn. mixed-ligand complexes for binding and photochem. cleavage of DNA)
- IT 1070-89-9 18054-46-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactions of, in prepn. mixed-ligand complexes for binding and photochem. cleavage of DNA)
- IT **7439-89-6DP**, Iron, mixed-ligand complexes **7440-50-8DP**, Copper, mixed-ligand complexes **7440-66-6DP**, Zinc, mixed-ligand complexes
RL: PREP (Preparation)
(prepn. of, as luminescence labels for DNA, photochem. cleavage in relation to)

RN 7439-89-6 HCAPLUS
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7440-50-8 HCAPLUS
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L78 ANSWER 19 OF 24 HCAPLUS COPYRIGHT 2003 ACS
 AN 1993:27465 HCAPLUS
 DN 118:27465
 TI Particulate drugs
 IN Filler, Aaron Gershon; Lever, Andrew Michael Lindsay
 PA St. George's Enterprises Ltd., UK
 SO PCT Int. Appl., 86 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K009-51
 CC 63-6 (Pharmaceuticals)
 Section cross-reference(s): 1, 8

FAN.CNT 4

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|------------------------------------------------------------|------|----------|-----------------|--------------|
| PI | WO 9211846 | A1 | 19920723 | WO 1992-EP21 | 19920104 <-- |
| | W: AU, CA, JP, NO, US | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE | | | | |
| | EP 861667 | A2 | 19980902 | EP 1997-119199 | 19910913 <-- |
| | EP 861667 | A3 | 20010808 | | |
| | R: DE, FR, GB | | | | |
| | CA 2099869 | AA | 19920708 | CA 1992-2099869 | 19920104 <-- |
| | AU 9211536 | A1 | 19920817 | AU 1992-11536 | 19920104 <-- |
| | EP 566590 | A1 | 19931027 | EP 1992-901269 | 19920104 <-- |
| | EP 566590 | B1 | 19970319 | | |
| | R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE | | | | |
| | JP 06504274 | T2 | 19940519 | JP 1992-501422 | 19920104 <-- |
| | US 5614652 | A | 19970325 | US 1993-87781 | 19931005 <-- |
| | US 5948384 | A | 19990907 | US 1995-473697 | 19950607 <-- |
| PRAI | GB 1991-233 | A | 19910107 | <-- | |
| | GB 1991-981 | A | 19910116 | <-- | |
| | GB 1991-2146 | A | 19910131 | <-- | |
| | GB 1991-10876 | A | 19910520 | <-- | |
| | GB 1991-16373 | A | 19910730 | <-- | |
| | GB 1991-17851 | A | 19910819 | <-- | |
| | GB 1991-18676 | A | 19910830 | <-- | |
| | GB 1991-19665 | A | 19910913 | <-- | |
| | GB 1990-20075 | A | 19900914 | <-- | |
| | GB 1990-23580 | A | 19901030 | <-- | |
| | GB 1990-27293 | A | 19901217 | <-- | |

GB 1991-2214 A 19910201 <--
 EP 1991-916129 A3 19910913 <--
 WO 1992-EP21 A 19920104 <--
 US 1993-988919 B3 19930504 <--

AB The use of particulate drugs in therapeutic or prophylactic treatments of conditions involving cellular infection or malfunction is described. Pharmaceutical compns. comprising endocytosable particles of radionuclide; metal, an alloy, oxide or a sulfide and an excipient can be used. The synthesis of ferrite particles and use of these particles for diseases treatment described.

ST particle pharmaceutical therapy; metal pharmaceutical therapy; virus particle pharmaceutical therapy; radionuclide particle pharmaceutical therapy

IT Neoplasm inhibitors
 Virucides and Virustats
 (inorg. particles)

IT Macrophage
 (inorg. pharmaceutical particles uptake by, in diseases treatment)

IT Phagocytosis
 (of inorg. pharmaceutical particles, disease treatment in relation to)

IT Alloys, biological studies
 Metals, biological studies
 Oxides, biological studies
 Radioelements, biological studies
 Sulfides, biological studies
 RL: BIOL (Biological study)
 (pharmaceutical particles contg., for diseases treatment)

IT Ferrite substances
 RL: PREP (Preparation)
 (prepn. of particles of, for disease treatment)

IT **Virus, animal**
 (human immunodeficiency, treatment of, with inorg. particles)

IT Pharmaceutical dosage forms
 (particles, inorg. agent-contg., for disease treatment)

IT 7440-20-2, Scandium, biological studies
 RL: BIOL (Biological study)
 (in ferrite particles synthesis for disease treatment)

IT 7705-08-0, Ferric chloride, reactions 7758-94-3, Ferrous chloride
 9004-54-0, Dextran, biological studies
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in ferrite particles synthesis for diseases treatment)

IT 7439-95-4, Magnesium, biological studies 7439-96-5, Manganese, biological studies
 7440-02-0, Nickel, biological studies 7440-05-3, Palladium, biological studies
 7440-48-4, Cobalt, biological studies
 7440-50-8, Copper, biological studies 7440-66-6, Zinc, biological studies
 14596-12-4, Iron 59, biological studies
 RL: BIOL (Biological study)
 (pharmaceutical particles contg., for diseases treatment)

IT 7440-50-8, Copper, biological studies 7440-66-6, Zinc, biological studies
 RL: BIOL (Biological study)
 (pharmaceutical particles contg., for diseases treatment)

RN 7440-50-8 HCAPLUS

CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

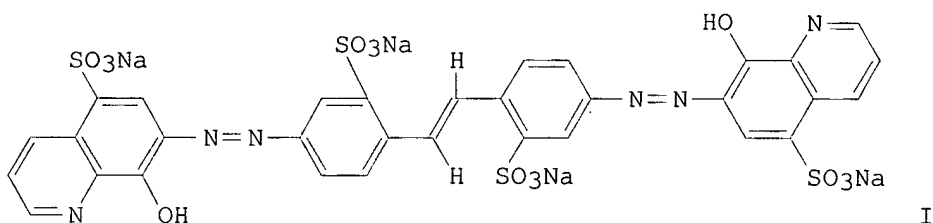
Cu

RN 7440-66-6 HCAPLUS

CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L78 ANSWER 20 OF 24 HCAPLUS COPYRIGHT 2003 ACS
 AN 1993:15843 HCAPLUS
 DN 118:15843
 TI Quinobene, a new potent anti-HIV agent
 AU Gruszecka-Kowalik, Ewa; Haugwitz, Rudiger D.; Zalkow, Leon H.
 CS Sch. Chem. Biochem., Georgia Inst. Technol., Atlanta, GA, 30332, USA
 SO Biochemical and Biophysical Research Communications (1992),
 187(3), 1409-17
 CODEN: BBRCA9; ISSN: 0006-291X
 DT Journal
 LA English
 CC 1-3 (Pharmacology)
 GI



AB A simple synthesis of the sulfonated azo dye Quinobene (I) and its derivs., as well as the results of their evaluation in anti-HIV screening have been described. Thus, reacting the diazonium salt of 4,4'-diaminostilbene-2,2'-disulfonic acid with 8-hydroxyquinoline-5-sulfonic acid yielded readily isolable I. The lithium and tetramethylammonium salts of I and its complexes with Cu(II), Zn (II), Mg(II) were also prepd. In vitro tests showed considerable activity of these compds. against HIV-1.

ST Quinobene prepn structure antiHIV

IT **Virucides and Virustats**
 (quinobene and derivs., against HIV-1)

IT **Virus, animal**
 (human immunodeficiency 1, quinobene and derivs. toxicity to, structure in relation to)

IT Molecular structure-biological activity relationship
 (virucidal, of quinobene and derivs.)

IT 81-11-8, 4,4'-Diaminostilbene-2,2'-disulfonic acid
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (diazotization of)

IT 145023-04-7 145037-85-0
 RL: BIOL (Biological study)
 (human immunodeficiency virus inhibition by, structure in relation to)

IT 140942-13-8P, Quinobene
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and anti-HIV activity, structure in relation to)

IT 7439-93-2DP, Lithium, quinobene complex 7439-95-4DP, Magnesium, quinobene complex 7440-50-8DP, Copper, quinobene complex 7440-66-6DP, Zinc, quinobene complex 140942-13-8DP, metal complexes
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

IT 145022-85-1P 145022-87-3P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, anti-HIV activity and structure in relation to)
 IT 51-92-3DP, Tetramethylammonium, quinobene complex
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, structure and anti-HIV activity of)
 IT 84-88-8, 8-Hydroxyquinoline-5-sulfonic acid
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of)
 IT 7440-50-8DP, Copper, quinobene complex 7440-66-6DP,
 Zinc, quinobene complex
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 RN 7440-50-8 HCAPLUS
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L78 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 2003 ACS

AN 1992:104322 HCAPLUS

DN 116:104322

TI Viral decoy vaccine

IN Kossovsky, Nir; Bunshah, Rointan F.

PA University of California, Oakland, USA

SO Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM A61K009-16

ICS A61K039-12

CC 15-2 (Immunochemistry)

Section cross-reference(s): 63

FAN.CNT 10

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
|------|-----------------------------------------------------------|------|----------|-----------------|----------|-----|
| PI | EP 465081 | A1 | 19920108 | EP 1991-305706 | 19910624 | <-- |
| | EP 465081 | B1 | 19940420 | | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE | | | | | |
| | US 5219577 | A | 19930615 | US 1990-542255 | 19900622 | <-- |
| | US 5178882 | A | 19930112 | US 1991-690601 | 19910424 | <-- |
| | CA 2045204 | AA | 19911223 | CA 1991-2045204 | 19910621 | <-- |
| | CA 2045204 | C | 19990105 | | | |
| | AU 9179210 | A1 | 19920102 | AU 1991-79210 | 19910621 | <-- |
| | AU 638841 | B2 | 19930708 | | | |
| | JP 05255111 | A2 | 19931005 | JP 1991-178805 | 19910624 | <-- |
| | JP 2932406 | B2 | 19990809 | | | |
| | AT 104546 | E | 19940515 | AT 1991-305706 | 19910624 | <-- |
| | ES 2055539 | T3 | 19940816 | ES 1991-305706 | 19910624 | <-- |
| | US 5462750 | A | 19951031 | US 1994-225100 | 19940408 | <-- |
| PRAI | US 1990-542255 | | 19900622 | | | <-- |
| | US 1991-690601 | | 19910424 | | | <-- |
| | EP 1991-305706 | | 19910624 | | | <-- |
| | US 1993-986 | | 19930106 | | | <-- |

- AB A biol. active compn. is provided which consists of core particles (diam. <1000 nm) coated with a layer (e.g. of a sugar) designed to allow attachment of biol. active proteins, peptides, or pharmacol. agents to the microparticles. When viral protein is attached to the particles, the result is a viral decoy which accurately mimics the native virus in both size and structure, while being entirely devoid of virulent activity. Other antigenic proteins or peptides are attached to provide mols. useful in raising antibodies or as a diagnostic tool. Pharmacol. agents are attached to the microparticles to provide pharmaceutical compns. The viral decoys are useful as vaccines. Thus, cellobiose-coated nanocryst. tin oxide microparticles were prepd. and used to immobilize Epstein-Barr virus (EBV) proteins to produce an EBV decoy. The EBV decoy had the same surface charge as the native virus, was recognized specifically and avidly by monoclonal antibodies, and evoked immunospecific antibodies with the same effectiveness as whole virus.
- ST virus decoy vaccine; Epstein Barr virus decoy particle; particle protein immobilization vaccine virus; peptide immobilization particle vaccine virus
- IT Carbohydrates and Sugars, uses
RL: USES (Uses)
(core particle coated with, protein or peptide bound to, for viral decoy for vaccine)
- IT Ceramic materials and wares
Metals, uses
Polymers, uses
RL: USES (Uses)
(core particle of, for protein or peptide binding for viral decoy for vaccine)
- IT Particles
(protein or peptide bound to, for viral decoy for vaccine)
- IT Virus, animal
(protein- or peptide-coated particles as decoys for, for vaccine)
- IT Vaccines
(viral decoy, particles with bound protein or peptide for)
- IT Virus, animal
(Epstein-Barr, vaccine against, viral decoy particles for)
- IT Virus, animal
(herpes, vaccine against, viral decoy particles for)
- IT **Virus, animal**
(**human immunodeficiency**, vaccine against, viral decoy particles for)
- IT Virus, animal
(human papilloma, vaccine against, viral decoy particles for)
- IT Nucleotides, polymers
RL: BIOL (Biological study)
(oligo-, core particle coated with, protein or peptide bound to, for viral decoy for vaccine)
- IT Virus, animal
(pox, vaccine against, viral decoy particles for)
- IT 528-50-7, Cellobiose
RL: BIOL (Biological study)
(core particle coated with, protein or peptide bound to, for viral decoy for vaccine)
- IT 1332-29-2, Tin oxide 1344-28-1, Aluminum oxide, biological studies
7439-89-6, Iron, uses 7440-02-0, Nickel, uses 7440-06-4,
Platinum, uses 7440-17-7, Rubidium, uses 7440-22-4, Silver, uses
7440-44-0, Carbon, biological studies 7440-47-3, Chromium, uses
7440-57-5, Gold, uses **7440-66-6, Zinc**, uses
7631-86-9, Silicon dioxide, uses 7782-40-3, Diamond, uses 7782-49-2,
Selenium, uses 9003-53-6, Polystyrene 11113-84-1, Ruthenium oxide
RL: BIOL (Biological study)
(core particle of, for protein or peptide binding for viral decoy for vaccine)

IT 7439-89-6, Iron, uses 7440-66-6, Zinc, uses
 RL: BIOL (Biological study)
 (core particle of, for protein or peptide binding for viral decoy for vaccine)

RN 7439-89-6 HCAPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7440-66-6 HCAPLUS

CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L78 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 2003 ACS

AN 1991:35979 HCAPLUS

DN 114:35979

TI Inductively heated magnetic particles and other methods for diagnosis or treatment of viruses and virus-infected cells

IN Gordon, David

PA USA

SO PCT Int. Appl., 36 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61N005-02

ICS A61N002-00; A61N001-00; A61K043-00; A61K049-00

CC 1-5 (Pharmacology)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|-----------------|--------------|
| PI | WO 9007322 | A1 | 19900712 | WO 1989-US5650 | 19891218 <-- |

W: JP

RW: AT, BE, CH, DE, ES, FR, GB, IT, LU, NL, SE

CA 2006051 AA 19900619 CA 1989-2006051 19891219 <--

PRAI US 1988-285979 19881219 <--

AB Methods are provided for treatment and/or diagnosis and/or siting of viruses, e.g. the AIDS virus, and the cells they infect. The methods comprise, e.g., introducing near, into, or onto the virus or virus-infected cell or both, minute particles having ferro- or dia- or paramagnetic properties. After localization, the particles are inductively heated by application of an alternating magnetic field for a time sufficient to bring about a temp. rise to a min. necessary to kill or desirably alter the behavior of the virus or virus-infected cell. Prior to, during, or after treatment, the particles can be used diagnostically to locate and/or map the virus in the living tissue. Treatment of viruses or virus-infected cells by alteration of O delivery or metabolic rate is also disclosed.

ST magnetic particle induction heat virucide; oxygen alteration virucide; metab alteration virucide; AIDS virus magnetic particle heat

IT **Virucides and Virustats**

(chemotherapeutic agent-contg. particles as)

IT Hydroxamic acids

RL: BIOL (Biological study)

(derivs., magnetic particles contg., inductive heating of, for virus infection diagnosis and treatment)

IT Dielectric property

Electric conductivity and conduction

- (detn. of, in particle distribution detn. in virus infection treatment and diagnosis)
- IT Porphyrins
RL: BIOL (Biological study)
(dicarboxylic acid-contg., magnetic particles contg., inductive heating of, for virus infection diagnosis and treatment)
- IT Chelating agents
(for iron, magnetic particles contg., inductive heating of, for virus infection diagnosis and treatment)
- IT Porphyrins
RL: BIOL (Biological study)
(hemato-, magnetic particles of, inductive heating of, for virus infection diagnosis and treatment)
- IT Heat, biological effects
(inductive, application to magnetic particles for virus infection diagnosis and treatment)
- IT Mitochondria
(iron of, inductive heating of endogenous, for virus infection diagnosis and treatment)
- IT Ferritins
Inorganic compounds
Organic compounds, biological studies
RL: BIOL (Biological study)
(magnetic particles contg., inductive heating of, for virus infection diagnosis and treatment)
- IT Chlorophylls, biological studies
Cytochromes
Ferredoxins
Rubredoxins
RL: BIOL (Biological study)
(magnetic particles of, inductive heating of, for virus infection diagnosis and treatment)
- IT Dipole moment
(mols. having, in viral infection treatment)
- IT Antibodies
RL: BIOL (Biological study)
(particles bound to, for virus infection treatment)
- IT Radioelements, biological studies
RL: BIOL (Biological study)
(particles bound to, for virus infection treatment, increased rate of metab. or oxidn. in relation to)
- IT Carbohydrates and Sugars, biological studies
RL: BIOL (Biological study)
(particles contg., for virus infection treatment)
- IT Reducing agents
(particles of, for virus infection treatment, increased rate of metab. or oxidn. in relation to)
- IT Animal metabolism
(virus infection treatment by alteration of rate of)
- IT Phosphates, biological studies
RL: BIOL (Biological study)
(virus infection treatment with, oxygen availability in relation to)
- IT Virus, animal
(DNA-contg., treatment of infection with, with alteration of oxygen delivery)
- IT Glycoproteins, specific or class
RL: BIOL (Biological study)
(E (envelope), ferritin particles binding to viral, in virus infection treatment)
- IT Imaging
(ESR, for virus infection diagnosis, inductive heating of magnetic particles in relation to)
- IT Imaging

(NMR, for virus infection diagnosis, inductive heating of magnetic particles in relation to)

IT Virus, animal
(RNA-contg., treatment of infection with, with alteration of oxygen delivery)

IT **Immunodeficiency**
(**acquired** immune deficiency **syndrome**, diagnosis of, inductive heating of magnetic particles in)

IT Therapeutics
(chemo-, agent for, particle of, for virus infection treatment)

IT Transferrins
RL: BIOL (Biological study)
(complexes, with ferric ferrous oxide and dextran, magnetic particles contg., inductive heating of, for virus infection diagnosis and treatment)

IT Rare earth metals, compounds
RL: BIOL (Biological study)
(dextran complexes, magnetic particles contg., inductive heating of, for virus infection diagnosis and treatment)

IT Particles
(diamagnetic, inductive heating of, in virus infection diagnosis and treatment)

IT Particles
(ferromagnetic, inductive heating of, in virus infection diagnosis and treatment)

IT **Virus, animal**
(**human immunodeficiency**, treatment of infection with, inductive heating of magnetic particles in)

IT Proteins, specific or class
RL: BIOL (Biological study)
(iron-sulfur-contg., magnetic particles contg., inductive heating of, for virus infection diagnosis and treatment)

IT Superconductor devices
(magnetometers, quantum interference, for virus infection diagnosis, inductive heating of magnetic particles in relation to)

IT Phenols, compounds
RL: BIOL (Biological study)
(metal salts, magnetic particles contg., inductive heating of, for virus infection diagnosis and treatment)

IT Phosphorylation, biological
(oxidative, virus infection treatment by alteration of)

IT Particles
(paramagnetic, inductive heating of, in virus infection diagnosis and treatment)

IT Magnetometers
(superconductive, quantum interference, for virus infection diagnosis, inductive heating of magnetic particles in relation to)

IT 81-88-9D, complexes with platinum 493-90-3 553-12-8 1185-57-5
1314-36-9, Yttrium oxide, biological studies 1400-46-0D, Mycobactin, derivs. 7429-91-6, Dysprosium, biological studies **7439-89-6D**,
Iron, dextran and myobactin complexes 7439-96-5D, Manganese, dextran complexes 7440-02-0D, Nickel, dextran complexes 7440-06-4D, Platinum, dextran complexes 7440-06-4D, Platinum, rhodamine complexes 7440-19-9, Samarium, biological studies 7440-27-9, Terbium, biological studies 7440-30-4, Thulium, biological studies 7440-47-3D, Chromium, dextran complexes 7440-48-4D, Cobalt, dextran complexes 7440-52-0, Erbium, biological studies 7440-53-1, Europium, biological studies 7440-55-3, Gallium, biological studies 7440-60-0, Holmium, biological studies 7440-64-4, Ytterbium, biological studies 7440-65-5, Yttrium, biological studies **7440-66-6D**, Zinc, dextran complexes 9004-54-0D, Dextran, metal complexes 12005-21-9, Aluminum yttrium oxide (Al5Y3O12) 12036-44-1, Thulium oxide (Tm2O3) 12063-56-8, Iron yttrium oxide (Fe5Y3O12) 12770-85-3, Europium oxide 13478-49-4, Erbium sulfate

13510-71-9 13537-15-0, Europium sulfate 13692-99-4, Terbium sulfate
 14373-91-2, Dysprosium sulfate 15630-64-5D, Ferrichrome, derivs.
 26183-20-0D, derivs. 26316-36-9 27121-71-7 28384-96-5, Enterochelin
 34787-28-5D, derivs. 38414-00-5, Samarium sulfate 39455-61-3, Holmium
 oxide 53800-82-1, Ytterbium sulfide

RL: BIOL (Biological study)

(magnetic particles contg., inductive heating of, for virus infection
 diagnosis and treatment)

IT 1309-33-7D, Ferric hydroxide, dextran complexes 1309-38-2D, Magnetite
 (Fe₃O₄), complexes with dextran and transferrin 35218-75-8
 35218-75-8D, derivs.

RL: BIOL (Biological study)

(magnetic particles of, inductive heating of, for virus infection
 diagnosis and treatment)

IT 14133-76-7, Technetium-99, biological studies 14885-78-0, Indium-113,
 biological studies

RL: BIOL (Biological study)

(metastable, particles bound to, for virus infection treatment)

IT 7782-41-4D, Fluorine, radioisotopes 14119-09-6, Gallium-67, biological
 studies 14265-71-5, Selenium-75, biological studies

RL: BIOL (Biological study)

(particles bound to, for virus infection treatment)

IT 50-99-7, D-Glucose, biological studies 57-50-1, Sucrose, biological
 studies

RL: BIOL (Biological study)

(particles contg., for virus infection treatment)

IT 2338-05-8, Iron citrate 10290-71-8, Iron carbonate 20344-49-4, Iron
 hydroxide oxide (Fe(OH)O)

RL: BIOL (Biological study)

(particles of, for virus infection treatment, increased rate of metab.
 or oxidn. in relation to)

IT 50-99-7, D-Glucose, biological studies

RL: BIOL (Biological study)

(virus infection treatment by control of delivery of, to virus or
 virus-infected cell)

IT 7782-44-7, Oxygen, biological studies

RL: BIOL (Biological study)

(virus infection treatment with alteration of delivery of)

IT 138-81-8

RL: PRP (Properties)

(virus infection treatment with increase of in vivo level of, oxygen
 availability in relation to)

IT 7439-89-6D, Iron, dextran and myobactin complexes

7440-66-6D, Zinc, dextran complexes

RL: BIOL (Biological study)

(magnetic particles contg., inductive heating of, for virus infection
 diagnosis and treatment)

RN 7439-89-6 HCAPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

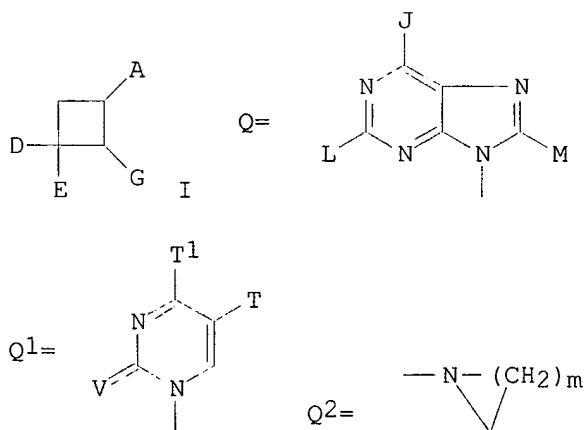
RN 7440-66-6 HCAPLUS

CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

AN 1990:612577 HCAPLUS
 DN 113:212577
 TI Preparation of nucleoside cyclobutane analogs as antiviral and antitumor agents
 IN Norbeck, Daniel W.; Plattner, Jacob J.; Rosen, Terry J.; Pariza, Richard J.; Sowin, Thomas J.; Garmaise, David L.; Hannick, Steven M.
 PA Abbott Laboratories, USA
 SO Eur. Pat. Appl., 115 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C07D473-00
 ICS C07D487-04; C07D471-04; A61K031-52; C07D239-54; C07D253-06; C07D251-26; C07D213-69; C07C215-42; C07F007-18; C07C275-26
 CC 33-9 (Carbohydrates)
 Section cross-reference(s): 1
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-------------------------------------------------------|------|--------------|-----------------|--------------|
| PI | EP 366059 | A2 | 19900502 | EP 1989-119703 | 19891024 <-- |
| | EP 366059 | A3 | 19911218 | | |
| | R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE | | | | |
| | CA 2001318 | AA | 19900425 | CA 1989-2001318 | 19891024 <-- |
| | DK 8905292 | A | 19900426 | DK 1989-5292 | 19891024 <-- |
| | AU 8943785 | A1 | 19900503 | AU 1989-43785 | 19891025 <-- |
| | JP 03047169 | A2 | 19910228 | JP 1989-278337 | 19891025 <-- |
| | US 5153352 | A | 19921006 | US 1990-570198 | 19900820 <-- |
| | US 5246931 | A | 19930921 | US 1991-694538 | 19910501 <-- |
| PRAI | US 1988-262547 | | 19881025 <-- | | |
| | US 1989-319385 | | 19890303 <-- | | |
| | US 1989-420691 | | 19891017 <-- | | |
| OS | MARPAT 113:212577 | | | | |
| GI | | | | | |



AB The title compds. [I; A = purin-9-yl (Q), pyrimidin-1-yl (Q1) or its heterocyclic isostere; J, L = H, OH, alkoxy, SH, thioalkoxy, N3, Q2, (un)substituted NH2, N:CHNH2, NHOH, or NHHNH2; m = 1-6; M = H, alkyl, halo, Q2, (un)substituted NH2; T = H, alkyl, 2-haloethyl, halomethyl, CF2H, CF3, halo, cyano, NO2, CH:CH2, SH, NHOH, unsubstituted NH2, Q2, etc.; V = O, S; T1 = OH, SH, alkoxy, thioalkoxy, halo, Q2; D, G = H, alkyl, OH, CH2OH, alkoxymethyl, alkylcarbonyloxymethyl, aminoalkylcarbonyloxymethyl, etc.; E = H, CH2OH, OH;] are prepd. Thus, condensation of 2,3-bis(hydroxymethyl)cyclobutylamine hydrochloride with 2-amino-4,6-

dichloropyrimidine in EtOH contg. Et3N and diazo coupling of the resulting 3-[(2'-amino-6'-chloro-4'-pyrimidinyl)amino]-1,2-bis(hydroxymethyl)cyclobutane with 4-ClC6H4N2+Cl- followed by Zn redn. in AcOH gave 3-[(6'-chloro-2',5'-diamino-4'-pyrimidinyl)amino]-1,2-bis(hydroxymethyl)cyclobutane. Cyclocondensation of the latter with AcOCH2(OEt)2 under reflux followed by hydrolysis gave 9-[2',3'-bis(hydroxymethyl)cyclobutyl]guanine (II). Approx. 25 I were prepd. and II in vitro was active against herpes simplex virus, human immunodeficiency virus 1 and 2, human cytomegalovirus, and Varicella-Zoster virus. II in vivo was active against hepatitis B virus in ducklings and HIV in mice. II and 4 other I showed antitumor activity against human lung carcinoma A549, human adenocarcinoma HCT-8 and mouse lymphocytic leukemia P388-DI.

ST carbocyclic nucleoside cyclobutane analog antiviral; antitumor carbocyclic nucleoside cyclobutane analog

IT Neoplasm inhibitors

Virucides and Virustats

(cyclobutylpurines and -pyrimidines)

IT Nucleosides, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)

(carbocyclic, cyclobutylpurines and -pyrimidines, prepn. of, as virucides)

IT Virus, animal

(human immunodeficiency, infection with, treatment of, cyclobutylpurines and -pyrimidines for)

IT Virus, animal

(human immunodeficiency 1, infection with, treatment of, cyclobutylpurines and -pyrimidines for)

IT Virus, animal

(retro-, infection with, treatment of, cyclobutylpurines and -pyrimidines for)

IT 2028-74-2P, 4-Chlorobenzenediazonium chloride 29737-65-3P 40628-41-9P

| | | | | |
|--------------|--------------|--------------|--------------|--------------|
| 57637-10-2P | 75880-66-9P | 130368-89-7P | 130368-90-0P | 130368-91-1P |
| 130368-92-2P | 130368-93-3P | 130368-94-4P | 130368-95-5P | 130368-96-6P |
| 130368-97-7P | 130368-98-8P | 130368-99-9P | 130369-00-5P | 130369-01-6P |
| 130369-02-7P | 130369-03-8P | 130369-04-9P | 130369-05-0P | 130369-06-1P |
| 130369-07-2P | 130369-08-3P | 130369-09-4P | 130369-10-7P | 130369-11-8P |
| 130369-12-9P | 130369-13-0P | 130369-14-1P | 130369-15-2P | 130369-16-3P |
| 130369-17-4P | 130369-18-5P | 130369-19-6P | 130369-20-9P | 130369-21-0P |
| 130369-22-1P | 130369-23-2P | 130369-24-3P | 130369-25-4P | 130369-26-5P |
| 130369-27-6P | 130369-28-7P | 130369-29-8P | 130369-30-1P | 130369-31-2P |
| 130369-32-3P | 130369-33-4P | 130369-34-5P | 130369-35-6P | 130369-36-7P |
| 130369-37-8P | 130369-38-9P | 130369-39-0P | 130369-40-3P | 130369-41-4P |
| 130369-42-5P | 130369-43-6P | 130369-44-7P | 130369-45-8P | 130369-46-9P |
| 130369-47-0P | 130369-48-1P | 130369-49-2P | 130369-50-5P | 130369-51-6P |
| 130369-52-7P | 130369-53-8P | 130369-54-9P | 130369-55-0P | 130369-56-1P |
| 130369-57-2P | 130369-58-3P | 130369-59-4P | 130369-60-7P | 130369-61-8P |
| 130369-62-9P | 130369-63-0P | 130369-64-1P | 130369-65-2P | 130369-66-3P |
| 130396-58-6P | 130396-59-7P | 130396-60-0P | 130396-61-1P | 130464-71-0P |
| 130464-73-2P | 130464-74-3P | 130464-75-4P | 130466-29-4P | |

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of, as intermediate for carbocyclic nucleoside cyclobutane analog)

IT 130369-67-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of, as intermediate for nucleoside analog)

IT 130369-62-9P

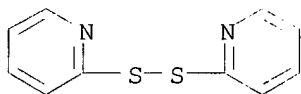
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of, as intermediate for virucide)

| | | | | |
|-----------------|--------------|--------------|--------------|--------------|
| IT 130368-76-2P | 130368-77-3P | 130368-78-4P | 130368-79-5P | 130368-80-8P |
| 130368-81-9P | 130368-82-0P | 130368-83-1P | 130368-84-2P | 130368-85-3P |
| 130368-86-4P | 130368-87-5P | 130368-88-6P | 130369-68-5P | 130369-69-6P |

130369-70-9P 130396-57-5P 130464-62-9P 130464-63-0P 130464-64-1P
 130464-65-2P 130464-66-3P 130464-67-4P 130464-68-5P 130464-69-6P
 130464-70-9P 130464-72-1P 130464-77-6P 130466-27-2P 130466-28-3P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); SPN (Synthetic preparation); BIOL (Biological
 study); PREP (Preparation)
 (prepn. of, as virucide)

IT 5413-85-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, in prepn. of nucleoside analog)
 IT 56-05-3, 2-Amino-4,6-dichloropyrimidine 64-18-6, Formic acid, reactions
 73-24-5, Adenine, reactions 75-65-0, reactions 100-51-6,
 Benzenemethanol, reactions 106-47-8, reactions 108-31-6,
 2,5-Furandione, reactions 122-51-0, Triethyl orthoformate 499-02-5
 593-56-6, O-Methylhydroxylamine hydrochloride 593-60-2, Vinyl bromide
 624-48-6, Dimethyl maleate 624-49-7 1007-99-4 1118-02-1,
 Trimethylsilyl isocyanate 1125-88-8, Benzaldehyde dimethyl acetal
 1822-73-7, Phenyl vinyl sulfide 2127-03-9 3315-16-0, Silver
 cyanate 5413-85-4, 5-Amino-4,6-dichloropyrimidine 5470-11-1,
 Hydroxylamine hydrochloride 10310-21-1, 2-Amino-6-chloropurine
 14036-06-7, Diethoxymethyl acetate 14052-82-5 15760-36-8 16333-93-0,
 1-Aminomethyl-3-methylenecyclobutane 18162-48-6, tert-Butyldimethylsilyl
 chloride 19597-69-4, Lithium azide 23519-90-6, 1-Cyclobutenecarboxylic
 acid 24424-99-5, Di-tert-butyl dicarbonate 26386-88-9 52410-41-0
 58479-61-1, tert-Butyldiphenylsilyl chloride 78001-78-2, Methyl
 4,4-diethoxy-1-cyclobutenecarboxylate 91352-79-3 99471-66-6
 106938-62-9, Diethylphosphonomethyl triflate 115118-68-8 130464-76-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, in prepn. of virucidal cyclobutylpurine or -pyrimidine)
 IT 2127-03-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, in prepn. of virucidal cyclobutylpurine or -pyrimidine)
 RN 2127-03-9 HCAPLUS
 CN Pyridine, 2,2'-dithiobis- (9CI) (CA INDEX NAME)



L78 ANSWER 24 OF 24 HCAPLUS COPYRIGHT 2003 ACS
 AN 1989:567382 HCAPLUS
 DN 111:167382
 TI Anti-AIDS drug containing sugars and inorganic elements
 extracted from Lentinus edodes
 IN Iizuka, Chiyokichi; Maeda, Hiroaki
 PA Noda Shokukin Kogyo Co., Ltd., Japan
 SO Eur. Pat. Appl., 12 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM A61K035-84
 CC 1-5 (Pharmacology)
 Section cross-reference(s): 16

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-------------------------------------------------------|------|----------|-----------------|--------------|
| PI | EP 292601 | A1 | 19881130 | EP 1987-110692 | 19870723 <-- |
| | R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE | | | | |
| PRAI | JP 1987-117286 | | 19870514 | <-- | |

- AB A compn. for treatment of **AIDS** comprises an ext. of *Lentinus edodes* mycelium contg. sugars, protein, and an inorg. element. The sugar is glucose, galactose, mannose, xylose, arabinose, fucose, and/or rhamnose. The inorg. element is K, Ca, Mn, Fe, Ni, Cu, **Zn**, Ge, Br-, Rb, and/or Sr. *L. edodes* was cultivated on a solid medium contg. bagasse 90, rice bran 5, and nutrients (e.g. wheat bran) 5% at 20-25.degree. and 60% relative humidity for 4-6 mo. The medium was then heated at 32-34.degree. for 24-48 h, maintained at 5-8.degree. for 5-7 days, cultured further for formation of fruiting bodies, dried (with autolysis of the mycelium), extd. with boiling water, filtered, condensed by ultrafiltration, and freeze dried. The product comprised sugar 44.0, protein 24.6, and other constituents 31.4%. The sugar compn. was glucose 27.5, galactose 3.1, mannose 6.7, xylose 30.9, arabinose 30.5, fucose 0.7, and rhamnose 0.6%. The elemental compn., detd. by radiog., was K 15.09, Ca 22.00, Mn 1.208, Fe 2.362, Ni 52.5, Cu 89.1, **Zn** 282.8, Ge <4, Br 11.4, Rb 39.4, and Sr 164.3 mg/g dry wt. A patient with symptoms of **AIDS**, antibodies to the **AIDS** virus, and a T4 cell count of 1250/mm3 was given the above prepn. orally at 6 g/day. The T4 cell count increased to 2045 after 30 days and 2542/mm3 after 60 days with amelioration of symptoms. The *L. edodes* ext. also inhibited prodn. of **AIDS** virus by infected MT-4 lymphocytes in vitro, enhanced prodn. of interleukin 1 by peritoneal macrophages, and was mitogenic toward mouse spleen cells. The oral and s.c. LD50 values in male rats were 17.2 and 4.5 g/kg, resp.
- ST **AIDS** treatment *Lentinus* sugar metal
- IT Macrophage
(interleukin 1 formation by, sugars and inorg. elements of *Lentinus edodes* effect on)
- IT Carbohydrates and Sugars, biological studies
Elements
Proteins, biological studies
RL: BIOL (Biological study)
(of *Lentinus edodes*, **AIDS** treatment with)
- IT Fermentation
(proteins and sugars and inorg. elements, with *Lentinus edodes*, neoplasm inhibition in relation to)
- IT **Virucides and Virustats**
(sugars and inorg. elements of *Lentinus edodes*, **AIDS** virus inhibition by)
- IT *Lentinus edodes*
(sugars and inorg. elements of, **AIDS** treatment with)
- IT **Immunodeficiency**
(**acquired** immune deficiency **syndrome**, treatment of, with sugars and inorg. elements of *Lentinus edodes*)
- IT Lymphocyte
(disease, infection, by **AIDS** virus, inhibition of, with sugars and inorg. elements of *Lentinus edodes*)
- IT **Virus, animal**
(**human immunodeficiency 1**, infection with; treatment of, with sugars and inorg. elements of *Lentinus edodes*)
- IT Lymphokines and Cytokines
RL: FORM (Formation, nonpreparative)
(interleukin 1, formation of, by macrophage, sugars and inorg. elements of *Lentinus edodes* effect on)
- IT 50-99-7, D-Glucose, biological studies 58-86-6, Xylose, biological studies 59-23-4, D-Galactose, biological studies 147-81-9, Arabinose 2438-80-4, Fucose 3458-28-4, D-Mannose 3615-41-6, Rhamnose **7439-89-6**, Iron, biological studies 7439-96-5, Manganese, biological studies 7440-02-0, Nickel, biological studies 7440-09-7, Potassium, biological studies 7440-17-7, Rubidium, biological studies 7440-24-6, Strontium, biological studies **7440-50-8**, Copper, biological studies 7440-56-4, Germanium, biological studies **7440-66-6**, **Zinc**, biological studies 7440-70-2,

Calcium, biological studies 24959-67-9, Bromide, biological studies
RL: BIOL (Biological study)
(of Lentinus edodes, AIDS treatment with)

IT 7439-89-6, Iron, biological studies 7440-50-8, Copper,
biological studies 7440-66-6, Zinc, biological studies
RL: BIOL (Biological study)
(of Lentinus edodes, AIDS treatment with)

RN 7439-89-6 HCAPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7440-50-8 HCAPLUS

CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS

CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

=> fil biosis

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RECORDS LAST ADDED: 12 March 2003 (20030312/ED)

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L103 ANSWER 1 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

AN 1996:143596 BIOSIS

DN PREV199698715731

TI Development of a new class of antiretroviral drugs attacking highly
conserved zinc fingers in nucleocapsid proteins.

AU Henderson, L. E. (1); Ott, D. E. (1); Desrosiers, R. C.; Lifson,
J. D.; Turpin, J. A.; Rice, W. G. (1); Arthur, L. O. (1)

CS (1) NCI-FCRDC, SAIC Frederick, Frederick, MD 21702 USA

SO Journal of Medical Primatology, (1995) Vol. 24, No. 4, pp. 185.

Meeting Info.: 13th Annual Symposium on Nonhuman Primate Models for AIDS
Monterey, California, USA November 5-8, 1994

ISSN: 0047-2565.

DT Conference

LA English

CC General Biology - Symposia, Transactions and Proceedings of Conferences,
Congresses, Review Annuals 00520

Biochemical Studies - Proteins, Peptides and Amino Acids 10064

Biochemical Studies - Minerals 10069

Pathology, General and Miscellaneous - Therapy 12512

Genetics of Bacteria and Viruses *31500

Virology - Animal Host Viruses 33506
 Immunology and Immunochemistry - Immunopathology, Tissue Immunology
 *34508
 Medical and Clinical Microbiology - Virology *36006
Chemotherapy - Antiviral Agents *38506
 BC **Retroviridae 02623**
 Cercopithecidae 86205
 Muridae *86375
 IT Major Concepts
 Genetics; Immune System (Chemical Coordination and Homeostasis);
 Infection; Pharmacology
 IT Miscellaneous Descriptors
 MEETING ABSTRACT; VIRAL REPLICATION
 ORGN Super Taxa
 Cercopithecidae: Primates, Mammalia, Vertebrata, Chordata, Animalia;
 Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia;
Retroviridae: Viruses
 ORGN Organism Name
 human immunodeficiency virus (Retroviridae); macaque monkey
 (Cercopithecidae); mouse (Muridae); simian immunodeficiency virus
 (Retroviridae)
 ORGN Organism Superterms
 animals; chordates; mammals; microorganisms; nonhuman mammals; nonhuman
 primates; nonhuman vertebrates; primates; rodents; vertebrates; viruses

 L103 ANSWER 2 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
 AN 1996:17766 BIOSIS
 DN PREV199698589901
 TI Inhibitors of HIV **nucleocapsid** protein **zinc** fingers as
 candidates for the treatment of AIDS.
 AU **Rice, William G. (1)**; Supko, Jeffrey G.; Malspeis, Louis;
 Buckheit., Robert W., Jr.; Clanton, David; Bu, Ming; Graham, Lisa;
 Schaeffer, Catherine A.; Turpin, Jim A.; Domagala, John; Gogiotti, Rocco;
 Bader, John P.; Halliday, Susan M.; Coren, Lori; Sowder, Raymond C. II;
Arthur, Larry O.; Henderson, Louis
 CS (1) Lab. Antiviral Drug Mechanisms, PRI/DynCorp., National Cancer Inst.,
 Frederick Cancer Research Development Center, Frederick, MD 21702 USA
 SO Science (Washington D C), (1995) Vol. 270, No. 5239, pp. 1194-1197.
 ISSN: 0036-8075.
 DT Article
 LA English
 AB Strategies for the treatment of human immunodeficiency virus-type 1
 (HIV-1) infection must contend with the obstacle of drug resistance. HIV-1
nucleocapsid protein **zinc** fingers are prime antiviral
 targets because they are mutationally intolerant and are required both for
 acute infection and virion assembly. Nontoxic disulfide-substituted
 benzamides were identified that attack the **zinc** fingers,
 inactivate cell-free virions, inhibit acute and chronic infections, and
 exhibit broad antiretroviral activity. The compounds were highly
 synergistic with other antiviral agents, and resistant mutants have not
 been detected. **Zinc** finger-reactive compounds may offer an
 anti-HIV strategy that restricts drug-resistance development.
 CC Biochemical Studies - General 10060
 Biochemical Studies - Proteins, Peptides and Amino Acids 10064
 Pathology, General and Miscellaneous - Therapy *12512
 Pharmacology - Clinical Pharmacology *22005
 Genetics of Bacteria and Viruses *31500
 Immunology and Immunochemistry - Immunopathology, Tissue Immunology
 *34508
 Medical and Clinical Microbiology - Virology *36006
Chemotherapy - Antiviral Agents *38506
 BC **Retroviridae 02623**
 Hominidae *86215

IT Major Concepts
Clinical Immunology (Human Medicine, Medical Sciences); Genetics;
Infection; Pathology; Pharmacology

IT Miscellaneous Descriptors
ACQUIRED IMMUNODEFICIENCY SYNDROME; DRUG RESISTANCE DEVELOPMENT

ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia;
Retroviridae: Viruses

ORGN Organism Name
human (Hominidae); **human immunodeficiency virus-1**
(Retroviridae)

ORGN Organism Superterms
animals; chordates; humans; mammals; microorganisms; primates;
vertebrates; viruses

L103 ANSWER 3 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

AN 1995:526322 BIOSIS

DN PREV199598540622

TI Novel disulfide-substituted benzamide (DIBA) inhibitors of HIV-1 p7NC
protein **zinc** fingers as candidates for the treatment of AIDS.

AU **Rice, William G. (1)**; Buckheit., Robert W., Jr.; Clanton, David
(1); Domagala, John; Gogliotti, Rocco; Bu, Ming (1); Graham, Lisa (1);
Schaeffer, Catherine A. (1); Tuppin, Jim A. (1); Bader, John P.; Halliday,
Susan M.; **Arthur, Larry O. (1)**; **Henderson, Louis E. (1)**

CS (1) SAIC Frederick, N01-C05600, National Cancer Inst.-FCRDC, Frederick, MD
21702 USA

SO Abstracts of the Interscience Conference on Antimicrobial Agents and
Chemotherapy, (1995) Vol. 35, No. 0, pp. 229.
Meeting Info.: 35th Interscience Conference on Antimicrobial Agents and
Chemotherapy San Francisco, California, USA September 17-20, 1995

DT Conference

LA English

CC General Biology - Symposia, Transactions and Proceedings of Conferences,
Congresses, Review Annuals 00520
Cytology and Cytochemistry - Human *02508
Biochemical Studies - Proteins, Peptides and Amino Acids 10064
Biochemical Studies - Minerals 10069
Blood, Blood-Forming Organs and Body Fluids - Blood, Lymphatic and
Reticuloendothelial Pathologies *15006
Pharmacology - Clinical Pharmacology *22005
Genetics of Bacteria and Viruses *31500
Immunology and Immunochemistry - Immunopathology, Tissue Immunology
*34508
Medical and Clinical Microbiology - Virology *36006
Chemotherapy - Antiviral Agents *38506

BC **Retroviridae 02623**
Hominidae *86215

IT Major Concepts
Cell Biology; Clinical Immunology (Human Medicine, Medical Sciences);
Genetics; Hematology (Human Medicine, Medical Sciences); Infection;
Pharmacology

IT Chemicals & Biochemicals
DISULFIDE; BENZAMIDE

IT Miscellaneous Descriptors
ACQUIRED IMMUNODEFICIENCY SYNDROME; DRUG RESISTANCE; MEETING ABSTRACT;
MEETING POSTER; THERAPEUTIC IMPLICATION

ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia;
Retroviridae: Viruses

ORGN Organism Name
human (Hominidae); **human immunodeficiency virus (Retroviridae)**

ORGN Organism Superterms
animals; chordates; humans; mammals; microorganisms; primates;

vertebrates; viruses
 RN 16734-12-6 (DISULFIDE)
 55-21-0D (BENZAMIDE)

L103 ANSWER 4 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
 AN 1995:526321 BIOSIS
 DN PREV199598540621
 TI 4-Iodo-3-nitrobenzamide (HNO-2BA) as a prodrug that targets HIV-1 p7
nucleocapsid protein **zinc** fingers as a potential
 treatment for HIV infection.
 AU Schaeffer, Catherine A. (1); Turpin, Jim A. (1); **Rice, William G.**
(1); Bu, Ming (1); Graham, Lisa (1); **Arthur, Larry O. (1)**;
Henderson, Louis E.; Mendeleyev, Jerome; Klun, Ernest
 CS (1) SAIC Frederick, N01-C05600, National Cancer Inst.-FCRDC, Frederick, MD
 21702 USA
 SO Abstracts of the Interscience Conference on Antimicrobial Agents and
 Chemotherapy, (1995) Vol. 35, No. 0, pp. 229.
 Meeting Info.: 35th Interscience Conference on Antimicrobial Agents and
 Chemotherapy San Francisco, California, USA September 17-20, 1995
 DT Conference
 LA English
 CC General Biology - Symposia, Transactions and Proceedings of Conferences,
 Congresses, Review Annuals 00520
 Cytology and Cytochemistry - Human *02508
 Biochemical Studies - Proteins, Peptides and Amino Acids 10064
 Biochemical Studies - Minerals 10069
 Blood, Blood-Forming Organs and Body Fluids - Blood, Lymphatic and
 Reticuloendothelial Pathologies *15006
 Pharmacology - Clinical Pharmacology *22005
 Genetics of Bacteria and Viruses *31500
 Immunology and Immunochemistry - Immunopathology, Tissue Immunology
 *34508
 Medical and Clinical Microbiology - Virology *36006
Chemotherapy - Antiviral Agents *38506
 BC **Retroviridae 02623**
 Hominidae *86215
 IT Major Concepts
 Cell Biology; Clinical Immunology (Human Medicine, Medical Sciences);
 Genetics; Hematology (Human Medicine, Medical Sciences); Infection;
 Pharmacology
 IT Miscellaneous Descriptors
 MEETING ABSTRACT; MEETING POSTER; THERAPEUTIC IMPLICATION
 ORGN Super Taxa
 Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia;
Retroviridae: Viruses
 ORGN Organism Name
 human (Hominidae); **human immunodeficiency virus (Retroviridae)**
 ORGN Organism Superterms
 animals; chordates; humans; mammals; microorganisms; primates;
 vertebrates; viruses

L103 ANSWER 5 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
 AN 1995:282849 BIOSIS
 DN PREV199598297149
 TI A new class of anti-viral drugs attack highly conserved **zinc**
 fingers in retroviral **nucleocapsid** proteins.
 AU **Henderson, L. E. (1)**; Sowder, R. C. II (1); Ott, D. E. (1);
Rein, A. R.; **Arthur, L. O. (1)**; **Rice, W. G. (1)**
 CS (1) PRI/DynCorp, NCI-FCRDC, Frederick, MD 21702 USA
 SO Journal of Cellular Biochemistry Supplement, (1995) Vol. 0, No. 21B, pp.
 191.
 Meeting Info.: Keystone Symposium on HIV Pathogenesis Keystone, Colorado,
 USA April 17-23, 1995

ISSN: 0733-1959.

DT Conference
 LA English
 CC General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520
 Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062
 Biochemical Studies - Proteins, Peptides and Amino Acids 10064
 Biochemical Studies - Minerals 10069
 Replication, Transcription, Translation 10300
 Pathology, General and Miscellaneous - Therapy 12512
 Pharmacology - Clinical Pharmacology *22005
 Genetics of Bacteria and Viruses *31500
 Virology - Animal Host Viruses 33506
 Immunology and Immunochemistry - Immunopathology, Tissue Immunology *34508
 Medical and Clinical Microbiology - Virology *36006
Chemotherapy - Antiviral Agents *38506

BC **Retroviridae** 02623
 Hominidae 86215
 Muridae *86375

IT Major Concepts
 Clinical Immunology (Human Medicine, Medical Sciences); Genetics; Infection; Pharmacology

IT Miscellaneous Descriptors
 MEETING ABSTRACT; MEETING POSTER; VIRAL REPLICATION

ORGN Super Taxa
 Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia; Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia; **Retroviridae: Viruses**

ORGN Organism Name
 human (Hominidae); **human immunodeficiency virus type-1 (Retroviridae)**; murine (Muridae)

ORGN Organism Superterms
 animals; chordates; humans; mammals; microorganisms; nonhuman mammals; nonhuman vertebrates; primates; rodents; vertebrates; viruses

L103 ANSWER 6 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
 AN 1995:149029 BIOSIS
 DN PREV199598163329
 TI A new class of anti-viral drugs attack highly conserved **zinc** fingers in retroviral **nucleocapsid** proteins.
 AU **Henderson, L. E.**; Sowder, R. C. II; Kane, B.; Casas-Finet, J. R.; **Arthur, L. O.**; **Rice, W. G.**
 CS PRI/DynCorp., NCI-FCRDC, Frederick, MD 21702 USA
 SO AMERICAN SOCIETY FOR MICROBIOLOGY.. (1995) pp. 68. Human retroviruses and related infections.
 Publisher: American Society for Microbiology (ASM) Books Division, 1325 Massachusetts Ave. NW, Washington, DC 20005-4171, USA.
 Meeting Info.: 2nd National Conference Washington, D.C., USA January 29-February 2, 1995
 ISBN: 1-55581-097-7.

DT Conference
 LA English
 CC General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520
 Biochemical Studies - Nucleic Acids, Purines and Pyrimidines *10062
 Biochemical Studies - Minerals *10069
 Blood, Blood-Forming Organs and Body Fluids - Blood, Lymphatic and Reticuloendothelial Pathologies *15006
 Blood, Blood-Forming Organs and Body Fluids - Lymphatic Tissue and Reticuloendothelial System *15008
 Pharmacology - Clinical Pharmacology *22005
 Pharmacology - Blood and Hematopoietic Agents *22008

Pharmacology - Immunological Processes and Allergy *22018
 Bacteriology, General and Systematic *30000
 Genetics of Bacteria and Viruses *31500
 Virology - Animal Host Viruses *33506
 Immunology and Immunochemistry - Immunopathology, Tissue Immunology
 *34508
 Medical and Clinical Microbiology - Virology *36006
Chemotherapy - Antiviral Agents *38506
 BC **Retroviridae 02623**
 Hominidae *86215
 IT Major Concepts
 Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport
 and Circulation); Clinical Immunology (Human Medicine, Medical
 Sciences); Genetics; Hematology (Human Medicine, Medical Sciences);
 Infection; Microbiology; Pharmacology; Systematics and Taxonomy
 IT Chemicals & Biochemicals
 AZIDOTHYIMIDINE; CYSTEINE
 IT Miscellaneous Descriptors
 AMINO ACID; ANTIVIRAL-DRUG; AZIDOTHYIMIDINE; AZT; CYSTEINE THIOLATE;
 DRUG DESIGN; DRUG RESISTANCE; DRUG SYNERGY; DRUG TARGET; HISTIDINE
 IMIDAZOLE; MEETING ABSTRACT; MEETING POSTER; RNA
 ORGN Super Taxa
 Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia;
Retroviridae: Viruses
 ORGN Organism Name
 human immunodeficiency virus type 1 (Retroviridae);
 retrovirus (Retroviridae); simian immunodeficiency virus
 (Retroviridae); Hominidae (Hominidae)
 ORGN Organism Superterms
 animals; chordates; humans; mammals; microorganisms; primates;
 vertebrates; viruses
 RN 30516-87-1 (AZIDOTHYIMIDINE)
 52-90-4 (CYSTEINE)
 L103 ANSWER 7 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
 AN 1995:138831 BIOSIS
 DN PREV199598153131
 TI Development of rapid screening assays for a new class of antiviral drugs
 attacking **zinc** fingers in retroviral **nucleocapsid**
 proteins.
 AU Casas-Finet, J. R.; Schaeffer, C. A.; Sowder, R. C. II; **Henderson, L.**
E.; Arthur, L. O.; Rice, W. G.
 CS PRI/DynCorp., NCI-FCRDC, Frederick, MD 21702 USA
 SO Biophysical Journal, (1995) Vol. 68, No. 2 PART 2, pp. A244.
 Meeting Info.: 39th Annual Meeting of the Biophysical Society San
 Francisco, California, USA February 12-16, 1995
 ISSN: 0006-3495.
 DT Conference
 LA English
 CC General Biology - Symposia, Transactions and Proceedings of Conferences,
 Congresses, Review Annuals 00520
 Biochemical Studies - Proteins, Peptides and Amino Acids *10064
 Biochemical Studies - Minerals *10069
 Biophysics - Molecular Properties and Macromolecules *10506
 Virology - Animal Host Viruses *33506
Chemotherapy - Antiviral Agents *38506
 BC **Retroviridae *02623**
 IT Major Concepts
 Biochemistry and Molecular Biophysics; Microbiology; Pharmacology
 IT Chemicals & Biochemicals
ZINC
 IT Miscellaneous Descriptors
 MEETING ABSTRACT; RATIONAL DRUG DESIGN; **ZINC** DISPLACEMENT

ORGN Super Taxa

Retroviridae: Viruses

ORGN Organism Name

human immunodeficiency virus type 1 (Retroviridae)

ORGN Organism Superterms

microorganisms; viruses

RN 7440-66-6 (ZINC)

L103 ANSWER 8 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

AN 1995:48608 BIOSIS

DN PREV199598062908

TI A new class of anti-viral drugs attacking highly conserved **zinc** fingers in retroviral **nucleocapsid** proteins.

AU **Henderson, L. E.**; Sowder, R. C. II; Casas-Finet, J. R.; **Arthur, L. O.**; Bader, J.; Buckheit, R. W.; Jr.; Clanton, D.; **Rice, W. G.**

CS PRI/DynCorp., NCI-Frederick Cancer Res. Dev. Cent., Frederick, MD 21702-1201 USA

SO AIDS Research and Human Retroviruses, (1994) Vol. 10, No. SUPPL. 3, pp. S153.

Meeting Info.: Annual Meeting of the Laboratory of Tumor Cell Biology Rockville, Maryland, USA September 25-October 1, 1994

ISSN: 0889-2229.

DT Conference

LA English

CC General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520

Biochemical Studies - Proteins, Peptides and Amino Acids 10064

Biochemical Studies - Minerals 10069

Biophysics - Molecular Properties and Macromolecules *10506

Virology - Animal Host Viruses *33506

Immunology and Immunochemistry - Immunopathology, Tissue Immunology *34508

Medical and Clinical Microbiology - Virology *36006

Chemotherapy - Antiviral Agents *38506

BC **Retroviridae 02623**

Hominidae *86215

IT Major Concepts

Biochemistry and Molecular Biophysics; Clinical Immunology (Human Medicine, Medical Sciences); Infection; Microbiology; Pharmacology

IT Miscellaneous Descriptors

LENTIVIRINAE; MEETING ABSTRACT; ONCOVIRINAE; PHARMACODYNAMICS

ORGN Super Taxa

Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia;

Retroviridae: Viruses

ORGN Organism Name

human immunodeficiency virus-1 (Retroviridae); Hominidae (Hominidae)

ORGN Organism Superterms

animals; chordates; humans; mammals; microorganisms; primates; vertebrates; viruses

L103 ANSWER 9 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

AN 1994:475365 BIOSIS

DN PREV199497488365

TI Retroviral **zinc** finger chelate as a new target site for HIV chemotherapy.

AU Kun, E. (1); Mendeleyev, J.; Hakam, Alaeddin; **Rice, W. G.**

CS (1) Octamer Res. Foundation, Romberg Tiburon Cent., San Francisco State Univ., P.O. Box 915, Tiburon, CA 94920 USA

SO TENTH INTERNATIONAL CONFERENCE ON AIDS, INTERNATIONAL CONFERENCE ON STD.. (1994) pp. 2) 32. Tenth International Conference on AIDS and the International Conference on STD, Vol. 2; The global challenge of AIDS:

Together for the future.

Publisher: Tenth International Conference on AIDS Yokohama, Japan.

Meeting Info.: Meeting Yokohama, Japan August 7-12, 1994

DT Conference
LA English
CC General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520
Social Biology; Human Ecology *05500
Behavioral Biology - Human Behavior *07004
Biochemical Studies - Minerals 10069
Reproductive System - General; Methods *16501
Genetics of Bacteria and Viruses *31500
Virology - Animal Host Viruses *33506
Immunology and Immunochemistry - Immunopathology, Tissue Immunology *34508
Medical and Clinical Microbiology - Virology *36006
Chemotherapy - Antiviral Agents *38506

BC **Retroviridae 02623**

Hominidae *86215

IT Major Concepts
Behavior; Clinical Immunology (Human Medicine, Medical Sciences);
Genetics; Human Ecology (Anthropology); Infection; Microbiology;
Pharmacology; Reproductive System (Reproduction)

IT Miscellaneous Descriptors
ACQUIRED IMMUNODEFICIENCY SYNDROME; MEETING ABSTRACT

ORGN Super Taxa

Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia;

Retroviridae: Viruses

ORGN Organism Name

human immunodeficiency virus (Retroviridae); Hominidae
(Hominidae)

ORGN Organism Superterms

animals; chordates; humans; mammals; microorganisms; primates;
vertebrates; viruses

L103 ANSWER 10 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

AN 1994:464497 BIOSIS

DN PREV199497477497

TI HIV-1 zinc fingers: A target for rational drug development.

AU **Henderson, L. E. (1);** Sowder, R. C. II (1); Bess., J. W., Jr.
(1); Casas-Finet, J. R.; Yu, X.; Fenselau, C.; **Rice, W. G.;**
Mendeleyev, J.; Wink, A.; Kun, E.; **Arthur, L. O. (1)**

CS (1) NCI-FCRDC, PRI/DynCorp, AIDS Vaccine Program, Frederick, MD 21702 USA

SO AIDS Research and Human Retroviruses, (1994) Vol. 10, No. SUPPL. 1, pp.
S27.

Meeting Info.: Annual Meeting of the Laboratory of Tumor Cell Biology
Bethesda, Maryland, USA August 22-28, 1993

ISSN: 0889-2229.

DT Conference

LA English

CC General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520
Biochemical Studies - General 10060
Biochemical Studies - Proteins, Peptides and Amino Acids 10064
Biophysics - Molecular Properties and Macromolecules *10506
Pathology, General and Miscellaneous - Therapy *12512
Genetics of Bacteria and Viruses *31500
Immunology and Immunochemistry - Immunopathology, Tissue Immunology *34508
Medical and Clinical Microbiology - Virology *36006
Chemotherapy - Antiviral Agents *38506

BC **Retroviridae 02623**

Hominidae *86215

IT Major Concepts
 Biochemistry and Molecular Biophysics; Clinical Immunology (Human Medicine, Medical Sciences); Genetics; Infection; Pathology; Pharmacology

IT Miscellaneous Descriptors
 ACQUIRED IMMUNODEFICIENCY SYNDROME; ANTIVIRAL DRUG TARGET; MEETING ABSTRACT; **NUCLEOCAPSID** PROTEIN; OXIDIZING AGENTS; THERAPEUTIC IMPLICATIONS; 3-NITROSOBENZAMIDE

ORGN Super Taxa
 Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia;
Retroviridae: Viruses

ORGN Organism Name
human immunodeficiency virus type 1 (Retroviridae); Hominidae (Hominidae)

ORGN Organism Superterms
 animals; chordates; humans; mammals; microorganisms; primates; vertebrates; viruses

L103 ANSWER 11 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

AN 1994:279479 BIOSIS

DN PREV199497292479

TI **Nucleocapsid zinc** fingers detected in retroviruses:
 EXAFS studies of intact viruses and the solution-state structure of the **nucleocapsid** protein from HIV-1.

AU Summers, Michael F. (1); **Henderson, Louis E.**; Chance, Mark R.; Bess, Julian W., Jr.; South, Terri L.; Blake, Paul R.; Sagi, Irit; Perez-Alvarado, Gabriela; Sowder, Raymond C., III; et al.

CS (1) Dep. Chem. Biochem., Univ. Md. Baltimore County, Baltimore, MD 21228 USA

SO Protein Science, (1992) Vol. 1, No. 5, pp. 563-574.
 ISSN: 0961-8368.

DT Article

LA English

AB All retroviral **nucleocapsid** (NC) proteins contain one or two copies of an invariant 3Cys-1His array (**CCHC** = C-X-2-C-X-4-H-X-4-C; C = Cys, H = His, X = variable amino acid) that are essential for RNA genome packaging and infectivity and have been proposed to function as **zinc**-binding domains. Although the arrays are capable of binding **zinc** in vitro, the physiological relevance of **zinc** coordination has not been firmly established. We have obtained **zinc**-edge extended X-ray absorption fine structure (EXAFS) spectra for intact retroviruses in order to determine if virus-bound **zinc**, which is present in quantities nearly stoichiometric with the **CCHC** arrays (Bess, J.W., Jr., Powell, P.J., Issaq, H.J., Schumack, L.J., Grimes, M.K., Henderson, L.E., & Arthur, L.O., 1992, J. Virol. 66, 840-847), exists in a unique coordination environment. The viral EXAFS spectra obtained are remarkably similar to the spectrum of a model **CCHC zinc** finger peptide with known 3Cys-1His **zinc** coordination structure. This finding, combined with other biochemical results, indicates that the majority of the viral **zinc** is coordinated to the NC **CCHC** arrays in mature retroviruses. Based on these findings, we have extended our NMR studies of the HIV-1 NC protein and have determined its three-dimensional solution-state structure. The **CCHC** arrays of HIV-1 NC exist as independently folded, noninteracting domains on a flexible polypeptide chain, with conservatively substituted aromatic residues forming hydrophobic patches on the **zinc** finger surfaces. These residues are essential for RNA genome recognition, and fluorescence measurements indicate that at least one residue (Trp-37) participates directly in binding to nucleic acids in vitro. The NC is only the third HIV-1 protein to be structurally characterized, and the combined EXAFS, structural, and nucleic acid-binding results provide a basis for the rational design of new NC-targeted antiviral agents and vaccines for

the control of AIDS.

- CC Radiation - Radiation and Isotope Techniques 06504
- Biochemical Methods - Proteins, Peptides and Amino Acids *10054
- Biochemical Methods - Minerals 10059
- Biochemical Studies - Proteins, Peptides and Amino Acids *10064
- Biochemical Studies - Minerals *10069
- Biophysics - General Biophysical Techniques *10504
- Biophysics - Molecular Properties and Macromolecules *10506
- Pathology, General and Miscellaneous - Therapy 12512
- Pharmacology - Immunological Processes and Allergy 22018
- Virology - Animal Host Viruses *33506
- Immunology and Immunochemistry - Bacterial, Viral and Fungal *34504
- Immunology and Immunochemistry - Immunopathology, Tissue Immunology 34508
- Medical and Clinical Microbiology - Virology *36006
- Chemotherapy - Antiviral Agents *38506**

- BC **Retroviridae *02623**

- IT Major Concepts
 - Biochemistry and Molecular Biophysics; Immune System (Chemical Coordination and Homeostasis); Infection; Methods and Techniques; Microbiology

- IT Miscellaneous Descriptors
 - ANTIVIRAL DRUG DESIGN; EXTENDED X-RAY ABSORPTION FINE STRUCTURE SPECTRA; NMR STRUCTURE; VACCINE DEVELOPMENT

- ORGN Super Taxa

Retroviridae: Viruses

- ORGN Organism Name

human immunodeficiency virus-1 (Retroviridae)

- ORGN Organism Superterms

microorganisms; viruses

- L103 ANSWER 12 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

- AN 1994:14138 BIOSIS

- DN PREV199497027138

- TI The site of antiviral action of 3-nitrosobenzamide on the infectivity process of human immunodeficiency virus in human lymphocytes.

- AU **Rice, William G. (1)**; Schaeffer, Catherine A.; Graham, Lisa; Bu, Ming; McDougal, J. Steven; Orloff, Sherry L.; Villinger, Francois; Young, Matthew; Oroszlan, Stephan; et al.

- CS (1) Lab. Antiviral Drug Mechanisms, Program Resources, Inc./DynCorp, National Cancer Inst-Frederick Cancer Res. Dev. Center, Building 431 T-B, PO Box B, Frederick, MD 21702 USA

- SO Proceedings of the National Academy of Sciences of the United States of America, (1993) Vol. 90, No. 20, pp. 9721-9724.
ISSN: 0027-8424.

- DT Article

- LA English

- AB The C-nitroso compound 3-nitrosobenzamide, which has been shown to remove **zinc** from the retroviral-type **zinc** finger of p7NC **nucleocapsid** proteins, inhibits acute infection of human immunodeficiency virus type 1 in cultured human lymphocytes. The attachment of the virus to lymphocytes and the activities of critical viral enzymes, such as reverse transcriptase, protease, and integrase, are not affected by 3-nitrosobenzamide. However, the process of reverse transcription to form proviral DNA is effectively abolished by the drug, identifying the mode of action of 3-nitrosobenzamide as interrupting the role of p7NC in accurate proviral DNA synthesis during the infectious phase of the virus life cycle.

- CC Biochemical Studies - General 10060
- Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062
- Biochemical Studies - Minerals 10069
- Blood, Blood-Forming Organs and Body Fluids - Blood, Lymphatic and Reticuloendothelial Pathologies *15006

Blood, Blood-Forming Organs and Body Fluids - Lymphatic Tissue and Reticuloendothelial System *15008
 Pharmacology - Clinical Pharmacology *22005
 Genetics of Bacteria and Viruses *31500
 Virology - Animal Host Viruses *33506
 Immunology and Immunochemistry - Bacterial, Viral and Fungal *34504
 Medical and Clinical Microbiology - Virology *36006
Chemotherapy - Antiviral Agents *38506

BC **Retroviridae 02623**

Hominidae *86215

IT Major Concepts

Blood and Lymphatics (Transport and Circulation); Genetics; Hematology (Human Medicine, Medical Sciences); Immune System (Chemical Coordination and Homeostasis); Infection; Microbiology; Pharmacology

IT Miscellaneous Descriptors

ANTIVIRAL-DRUG; PROVIRAL DNA BLOCK; ZINC FINGER;
 3-NITROSOBENZAMIDE

ORGN Super Taxa

Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia;
Retroviridae: Viruses

ORGN Organism Name

Hominidae (Hominidae); **Retroviridae (Retroviridae)**

ORGN Organism Superterms

animals; chordates; humans; mammals; microorganisms; primates;
 vertebrates; viruses

L103 ANSWER 13 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

AN 1993:399629 BIOSIS

DN PREV199345058454

TI Novel **zinc**-ejecting C-nitroso compounds inhibit the infectious and expressive phases of HIV-1 life cycle.

AU **Rice, William G. (1)**; Schaeffer, Catherine A. (1); McDougal, J. Steven; Orloff, Sherry L.; Summers, Michael F.; South, Terri L.; Mendeleyev, Jerome; Kun, Ernest

CS (1) Lab. Antiviral Drug Mechanisms, Program Res. Inc./DynCorp, NCI-Frederick Cancer Res. Development Center, Frederick, MD 21702 USA

SO Journal of Cellular Biochemistry Supplement, (1993) Vol. 0, No. 17 PART E, pp. 22.

Meeting Info.: Keystone Symposium on Frontiers in HIV Pathogenesis
 Albuquerque, New Mexico, USA March 29-April 4, 1993
 ISSN: 0733-1959.

DT Conference

LA English

CC General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520

Biochemical Studies - General 10060

Biochemical Studies - Minerals 10069

Pharmacology - General *22002

Virology - Animal Host Viruses *33506

Medical and Clinical Microbiology - Virology *36006

Chemotherapy - Antiviral Agents *38506

BC **Retroviridae *02623**

IT Major Concepts

Infection; Microbiology; Pharmacology

IT Miscellaneous Descriptors

ABSTRACT; ANTIVIRAL-DRUG; 3=NITROSOBENZAMIDE

ORGN Super Taxa

Retroviridae: Viruses

ORGN Organism Name

human immunodeficiency virus type 1 (Retroviridae)

ORGN Organism Superterms

microorganisms; viruses

L103 ANSWER 14 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1993:222365 BIOSIS
DN PREV199344106865
TI 3-Nitrosobenzamide (NOBA) reacts with the **zinc**-finger sequences of HIV-1 **nucleocapsid** protein (P7) and phage T4 gene 32 protein (GP32).
AU Casas-Finet, J. R. (1); Sowder, R. C.; Yu, X.; Mendeleyev, J.; Fenselau, C.; Kun, E.; Erickson, J. W. (1); **Henderson, L. E.**
CS (1) Struct. Biochem., NCI-FCRDC, Frederick, MD 21702 USA
SO Biophysical Journal, (1993) Vol. 64, No. 2 PART 2, pp. A125.
Meeting Info.: Thirty-seventh Annual Meeting of the Biophysical Society Washington, D.C., USA February 14-18, 1993
ISSN: 0006-3495.
DT Conference
LA English
CC General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520
Biochemical Methods - Proteins, Peptides and Amino Acids *10054
Biochemical Studies - General 10060
Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062
Biochemical Studies - Proteins, Peptides and Amino Acids 10064
Biophysics - General Biophysical Techniques *10504
Virology - Bacteriophage 33504
Virology - Animal Host Viruses 33506
Medical and Clinical Microbiology - Virology *36006
Chemotherapy - Antiviral Agents *38506
BC **Retroviridae 02623**
Myoviridae *02707
IT Major Concepts
Infection; Methods and Techniques; Pharmacology
IT Miscellaneous Descriptors
ABSTRACT; ANALYTICAL METHOD; ANTIVIRAL; DNA; HIGH PERFORMANCE LIQUID CHROMATOGRAPHY; HUMAN IMMUNODEFICIENCY VIRUS-TYPE I; MASS SPECTROMETRY
ORGN Super Taxa
Myoviridae: Viruses; **Retroviridae: Viruses**
ORGN Organism Name
Myoviridae (Myoviridae); **Retroviridae (Retroviridae)**
ORGN Organism Superterms
microorganisms; viruses

L103 ANSWER 15 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1992:318862 BIOSIS
DN BR43:19587
TI STRUCTURE AND FUNCTION OF **NUCLEOCAPSID** NC PROTEIN A TARGET FOR DRUG DEVELOPMENT.
AU **HENDERSON L E**; GORELICK R J; POWELL P J; SOWDER R C II; BESS J W JR; **ARTHUR L O**; SUMMERS M F; SOUTH T L; BLAKE P R; ET AL
CS AIDS, VACCINE PROG., PRI/DYNCORP., NCI-FREDERICK CANCER RES. DEV. CENT., FREDERICK, MD. 21702.
SO KEYSTONE SYMPOSIUM ON PREVENTION AND TREATMENT OF AIDS, KEYSTONE, COLORADO, USA, MARCH 27-APRIL 3, 1992. J CELL BIOCHEM SUPPL. (1992) 0 (16 PART E), 80.
CODEN: JCBSD7.
DT Conference
FS BR; OLD
LA English
CC General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520
Cytology and Cytochemistry - Human *02508
Biochemical Studies - Proteins, Peptides and Amino Acids 10064
Virology - Animal Host Viruses *33506
Immunology and Immunochemistry - Bacterial, Viral and Fungal *34504
Immunology and Immunochemistry - Immunopathology, Tissue Immunology

*34508

Medical and Clinical Microbiology - Virology *36006

Chemotherapy - Antiviral Agents *38506

BC Retroviridae - Lentivirinae 02242

Hominidae 86215

IT Miscellaneous Descriptors

ABSTRACT HUMAN IMMUNODEFICIENCY VIRUS TYPE I ACQUIRED IMMUNODEFICIENCY
SYNDROME

=> d his

(FILE 'HOME' ENTERED AT 13:39:53 ON 15 MAR 2003)

SET COST OFF

FILE 'HCAPLUS' ENTERED AT 13:40:25 ON 15 MAR 2003

L1 45 S E3,E8
 E HENDERSON L/AU
L2 123 S E3,E4,E6,E7
 E HENDERSON LOU/AU
 E ARTHUR L/AU
L3 115 S E3,E6,E9-E11
 E RICE W/AU
L4 18 S E3,E9
L5 61 S E45,E52,E53
 E REIN A/AU
L6 106 S E3,E6,E8
 E US600155/PN
 E US6001555/PN
L7 1 S E3
L8 1 S L1-L6 AND L7
 SEL RN

FILE 'REGISTRY' ENTERED AT 13:57:16 ON 15 MAR 2003

L9 56 S E1-E56
 E IRON, ION/CN
L10 1 S E67
 E COPPER, ION/CN
L11 1 S E55
L12 16 S 10102-43-9 OR 541-59-3 OR 137-26-8 OR 97-77-8 OR 4136-91-8 OR
L13 2 S L9 AND ZN/ELS
L14 2 S 7440-50-8 OR 7439-89-6
L15 36 S L9 NOT L10-L14
L16 28 S L15 AND S>=2
L17 48 S L10,L11,L12,L14,L16
L18 8 S L9 NOT L13,L17
L19 1 S L18 AND NC4/ES
L20 49 S L17,L19
L21 7 S L18 NOT L20
L22 1 S 156730-41-5
L23 50 S L20,L22

FILE 'HCAPLUS' ENTERED AT 14:25:59 ON 15 MAR 2003

L24 744102 S L23
 E DISULFIDE/CT
 E E7+ALL
L25 9262 S E3
 E E7+ALL
L26 2736 S E5
L27 32131 S E5+NT
 E HYDRAZIDE/CT
 E E10+ALL
L28 1940 S E3

L29 50477 S E3+NT
 E KETONE/CT
 L30 613 S E111
 L31 9512 S E141-E143,E154,E155
 L32 5151 S KETONE#/CW (L) (HALID? OR HALO? OR CHLOR? OR FLUOR? OR IODO?)
 L33 46333 S E16
 L34 49973 S KETONE#/CW
 E RETROVIR/CT
 E E6+ALL
 L35 5912 S E4,E3
 L36 50318 S E3+NT
 E LENTIVIR/CT
 E E5+ALL
 L37 39973 S E5,E4+NT
 E ONCOVIR/CT
 L38 32 S VIRUS?/CW (L) (ONCO OR ONCOVIR?)
 E HIV/CT
 E E5+ALL
 E E2+ALL
 L39 16946 S E7,E8,E6+NT
 E E5+ALL
 L40 37204 S E6,E5+NT
 L41 658 S L24-L34 AND L35-L40
 L42 62 S L13 AND L41
 L43 24 S (ZINC OR ZN) (L) FINGER AND L41
 L44 75 S L42,L43
 L45 3 S L41 AND CCHC
 L46 24 S L41 AND NUCLEOCAPSID?
 L47 85 S L41 AND (ZN OR ZINC)
 L48 90 S L44-L47
 L49 14 S L1-L6 AND L41

FILE 'REGISTRY' ENTERED AT 14:37:59 ON 15 MAR 2003

L50 1 S 2127-03-9

FILE 'HCAPLUS' ENTERED AT 14:39:09 ON 15 MAR 2003

L51 901 S L50
 L52 38 S 2(A)ALDRITHIOL
 L53 1 S NSC677438 OR NSC() (677438 OR 677 438)
 L54 49 S BIS 2 PYRID? DISULFIDE
 L55 239 S 2 PYRIDYL DISULFIDE
 L56 63 S 2 2 DITHIOBIS PYRIDINE
 L57 358 S 2 2 DIPYRID? DISULFIDE
 L58 196 S 2 2 DITHIODIPYRIDINE
 L59 68 S DI 2 PYRID? DISULFIDE
 L60 49 S BIS 2 PYRID? DISULFIDE
 L61 29 S L51-L60 AND L35-L40
 L62 10 S L61 AND (L13 OR ZINC OR ZN OR FINGER OR NUCLEOCAPSID? OR CCHC
 L63 110 S L48,L49,L8,L61,L62
 L64 42 S L63 AND (PY<=1995 OR PRY<=1995 OR AY<=1995)
 L65 40 S L63 AND (PD<=19950127 OR PRD<=19950127 OR AD<=19950127)
 L66 38 S L63 AND (PD<=19940923 OR PRD<=19940923 OR AD<=19940923)
 L67 38 S L66 AND L1-L8,L24-L49,L51-L66
 E ANTIVIRAL/CT
 E E5+ALL
 L68 19 S L67 AND E10,E11,E9+NT
 L69 8 S L67 AND INACTIV?
 L70 23 S L68,L69
 L71 15 S L67 NOT L70
 SEL DN AN L71 3 9
 L72 2 S E1-E6 AND L71
 L73 25 S L70,L72
 L74 24 S L73 AND (HIV? OR HUMAN(L) IMMUNODEFICIEN?(L) (VIRUS OR SYNDROM?

L75 1 S L73 NOT L74
L76 8 S L61,L62 AND (PY<=1995 OR PRY<=1995 OR AY<=1995)
L77 2 S L76 NOT L74
L78 24 S L74 AND L1-L8,L24-L49,L51-L77
SEL HIT RN

FILE 'REGISTRY' ENTERED AT 14:52:36 ON 15 MAR 2003

L79 51 S E7-E57
L80 49 S L79 NOT ZN/ELS

FILE 'REGISTRY' ENTERED AT 14:53:10 ON 15 MAR 2003

L81 2 S L79 NOT L80

FILE 'HCAPLUS' ENTERED AT 14:53:49 ON 15 MAR 2003

SET COST ON
SET COST OFF

FILE 'BIOSIS' ENTERED AT 14:54:40 ON 15 MAR 2003

E HENDERSON L/AU
L82 295 S E3,E8
E HENDERSON LOU/AU
L83 75 S E3-E5
E ARTHUR L/AU
L84 269 S E3,E9,E11-E12
E RICE W/AU
L85 50 S E3,E9
L86 53 S E26,E28
E REIN A/AU
L87 134 S E3,E7,E8,E10
L88 729 S L82-L87
L89 4 S L23 AND L88
E RETROVIR/BC
L90 420 S L88 AND E4-E8
L91 10 S CCHC AND L88
L92 92 S (ZN OR ZINC OR L81) AND L88
L93 103 S NUCLEOCAPSID? AND L88
L94 100 S L93 AND L90
L95 71 S L94 AND L91,L92
L96 287 S L89-L95 AND PY<=1995
L97 38 S L96 AND L89,L91,L92
L98 39 S L96 AND L93
L99 50 S L97,L98
L100 29 S L99 NOT AB/FA
L101 12 S L100 AND 38506/CC
L102 15 S L99 AND 38506/CC
L103 15 S L101,L102
L104 35 S L99 NOT L103

FILE 'BIOSIS' ENTERED AT 15:03:23 ON 15 MAR 2003